
ALBERTA

**DEPT OF
LANDS AND
MINES**

**ANNUAL
REPORT**

1945-50

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ANNUAL REPORT
OF THE
Department of Lands and Mines
OF THE
PROVINCE OF ALBERTA
FOR THE
Fiscal Year Ended March 31st
1946

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY



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1947

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*To the Honourable J. C. Bowen,
Lieutenant Governor of the Province of Alberta.*

SIR:

I have the honour to submit the report of the Department of Lands and Mines for the fiscal year ended March 31st, 1946.

I have the honour to be, Sir,

Your obedient servant,

N. E. TANNER,

Minister of Lands and Mines.

Edmonton, January 4th, 1947.

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GOVERNMENT OF ALBERTA
DEPARTMENT OF LANDS AND MINES

Resulting from the transfer on October 1st, 1930, of Alberta's natural resources from federal to provincial control, the Department of Lands and Mines was on this date brought into being by the Alberta Government. The general purpose of the new Department was to be one of supervision and management of the resources in question.

Ministers of the Department, responsible at different periods for this administration, appear as follows:

Hon. R. G. Reid, appointed October 2nd, 1930,
Hon. Hugh W. Allen, appointed July 10th, 1934,
Hon. Charles C. Ross, appointed September 3rd, 1935,
Hon. N. E. Tanner, appointed January 5th, 1937.

CHIEF OFFICERS
DEPARTMENT OF LANDS AND MINES

March 31st, 1946

Honourable N. E. Tanner	<i>Minister of Lands and Mines</i>
John Harvie	<i>Deputy Minister of Lands and Mines</i>
T. C. Rankine	<i>Departmental Solicitor</i>
V. A. Wood	<i>Director of Lands</i>
M. Gossip	<i>Agent, Calgary Land Agency</i>
R. Cruickshank	<i>Agent, Peace River Land Agency</i>
H. H. Somerville	<i>Superintendent of Mining Lands</i>
H. Ingrey	<i>Inspector of Mining Rights</i>
T. F. Blefgen	<i>Director of Forestry</i>
E. S. Huestis	<i>Acting Assistant Director of Forestry</i>
F. W. Neilson	<i>Chief Timber Inspector</i>
A. Earnshaw	<i>Radio Superintendent</i>
E. S. Huestis	<i>Fish and Game Commissioner</i>
D. E. Forsland	<i>Superintendent of Game</i>
H. B. Watkins	<i>Superintendent of Fisheries</i>
T. W. Dalkin	<i>Superintendent of the Technical Division</i>
J. L. Crawford	<i>Chief Inspector of Mines</i>
I. N. McKinnon	<i>Accountant</i>

SPECIAL AREAS BOARD

Head Office: Hanna, Alberta

M. Baldwin	<i>Chairman</i>
D. M. Graham	<i>Secretary</i>
J. R. McBeath	<i>Member</i>
J. H. Todrick	<i>Supervisor, Edmonton</i>

SPECIAL DISTRICT AGENTS

J. Pokojoy	<i>Hanna</i>
A. D. McIntyre	<i>Oyen</i>
D. J. Wilson	<i>Consort</i>
R. H. D. Marguet	<i>Lomond</i>

THE PETROLEUM AND NATURAL GAS CONSERVATION BOARD

Head Office: Calgary

A. G. Bailey	<i>Deputy Chairman</i>
D. P. Goodall	<i>Member</i>

REPORT

OF THE

Department of Lands and Mines

1945-1946

HONOURABLE N. E. TANNER,
Minister of Lands and Mines,
Edmonton.

SIR:

I have the honour to submit the seventeenth annual report of the Department of Lands and Mines for the fiscal year ended March 31st, 1946.

The year under review saw the end of the Second World War. Once more we are faced with the problem of helping to repair the ravages of a war torn world, the rehabilitation of our men who served in the fighting forces and the conversion of our economy from war to peace.

During the war, production from our resources reached an all time high and contributed in no small way to Canada's splendid war record. Whether we can maintain our production at a high level and whether it is desirable to do so in all cases is the problem we now have to face.

Oil production reached its peak in 1941-42 and despite an enormous exploration programme conducted by the oil companies, production from new fields has failed to counteract so far the drop in Turner Valley production.

Coal production during 1945 was the highest in history and with more man power available could be increased still further, but in this case it is a matter of marketing. The industry made an important contribution to the war effort, and it is to be hoped that future Dominion policy will, together with a research programme to discover new uses, enable our production to be stabilized, at least at its present level.

Lumber production also reached peak levels during the war years and the demand has, if anything, increased but it is doubtful whether any increase in production or even present production should be allowed to continue if we are to maintain our watersheds and the necessary forest cover.

Revenue increased correspondingly, reaching a peak in 1944-45, and while there was a decrease of \$81,156.98 in net revenue during the past year, it is still eighty-two per cent more than the net revenue for the year 1938-1939.

While the Department was hard pressed during the war years to carry on with a greatly increased volume of work and a depleted staff, the responsibility of helping to re-establish our veterans was never lost sight of, and in September, 1945, the Government was able to announce a comprehensive land settlement plan for veterans on vacant provincial and school lands. The plan enables a veteran to obtain under a veteran agricultural lease, subject to varied conditions, three hundred and twenty acres of uncleared or cleared and broken provincial or school lands. He may obtain title to the land in ten years provided he complies with the terms of the lease. If the land is not cleared and broken the veteran pays no crop share for the first three crop years he has the land under lease, and a one-eighth share thereafter which includes taxes. If the land is cleared and broken he pays a one-third share of the crop including taxes for the first seven

years he cultivates the land and thereafter a one-eighth share including taxes. Provision is also made that in the event of the average yield from the land being less than five bushels per acre no crop share is payable. To enable veterans to acquire cleared and broken land the Government has selected and reserved three areas covering approximately eighty townships in the vicinity of the hamlet of Tangent in the Peace River area and is making arrangements to have the land cleared and broken under contract.

Should certain proposed irrigation schemes be found feasible and arrangements made to go ahead with them, provincial lands within the boundaries of each project will be sold to veterans at a nominal price of \$10.00 with a maximum of one hundred and sixty acres to each applicant, but they will be required to pay all taxes, water rates and other charges against the land. Further details of the whole settlement plan will be found in the report of the Director of Lands.

All land applied for under agricultural lease is inspected by a qualified soil inspector as to its suitability for cultivation before a lease is granted. This has led to some delays in approving of applications due to a shortage of qualified soil men. However, it is felt that it is in the best interests of the veteran to make sure that the land he wishes to acquire can be farmed successfully.

REVENUE

A surplus of \$2,302,915.07 on income account was shown for the fiscal year ending March 31st, 1946, as compared with \$2,442,790.39 for the previous year, a decrease of \$139,875.32.

Expenditure on income account amounted to \$1,100,558.26, an increase of \$58,718.34, while net revenue was \$3,403,473.33, a decrease of \$81,156.98. Main increases and decreases on revenue account were as follows:

	Increase	Decrease
FISHERIES BRANCH:		
Miscellaneous	\$ 8,054.58	.....
GAME BRANCH:		
Game Licenses	21,397.25	.....
Miscellaneous	19,097.53	.....
LANDS AND GRAZING BRANCH:		
Grazing Rentals, Fees, etc.	73,157.93	.....
Miscellaneous		\$ 7,031.76
TIMBER BRANCH:		
Timber Rentals, Fees, Dues, etc.	158,796.79	.....
Miscellaneous	917.45	.....
MINING LANDS BRANCH:		
Miscellaneous Rentals, Fees, etc.	14,932.33	.....
Coal Rentals, Fees, etc.	36,605.81	.....
Petroleum and Natural Gas Fees, Rentals, etc.		245,751.13
Petroleum and Natural Gas Royalty		118,889.60
Sundry items	9,890.19	.....
MINERAL TAX ACT	67,342.84	.....
UNEARNED INCREMENT TAX	4,848.43	.....
SCHOOL LANDS BRANCH:		
Interest on Sales		45,737.29
Cultivation Rentals, Fees, etc.		46,779.75
P. & N. G. Fees, Rentals, etc.		39,697.58
Miscellaneous	11,952.79	.....
MISCELLANEOUS		4,263.79
NET REVENUE DECREASE	81,156.98	.....
	<u>\$508,150.90</u>	<u>\$508,150.90</u>

LANDS ADMINISTRATION

There have been a large number of applications and inquiries for agricultural leases, both veteran and civilian. During the fiscal year, 571 civilian applications were received and 595 from veterans. Many of the inquiries pertained to the lands in areas which are to be cleared and broken, but no applications for leases are as yet being accepted in these areas and will not be until the work of clearing and breaking is further advanced.

Under the terms of Order in Council No. 1171/45 all vacant provincial and school lands other than fractional areas are available for disposition only to

certified veterans of World War Two and to residents of Alberta who have been in continuous residence in the Province from January 1st, 1944.

The new scheme introduced on January 1st, 1945, of basing grazing rentals on the productivity of the grazing land and the prevailing price of cattle seemed to have met with general approval. The few complaints received have been regarding the carrying capacity of certain lands, and they have been referred to the grazing appraiser for investigation and adjustment. The rental for 1946 was set at the same rate as for 1945, there being insufficient variation in the computing factors to warrant a change. New grazing lease regulations were established during the year under Order in Council No. 597/45.

There were fifteen grazing reserves and community pastures in operation at the end of the fiscal year. Ten of these were operated by associations holding long term grazing leases, two by associations obtaining annual permits, and three were operated by the Department.

Crop share collections were considered satisfactory taking into consideration the relatively poor crops harvested throughout the Province. The average wheat yield in the western part of the Province being 4.9 bushels per acre and in the east half 12.6 bushels per acre. Peace River yields were also disappointing, the average yield being 13 bushels per acre.

SCHOOL LANDS

Veterans of World War Two who were residing in Alberta at the time of enlistment and who do not own any farm land are being given the opportunity of acquiring up to three hundred and twenty acres of vacant school lands under the agricultural lease regulations. Before the lease will issue the school lands will be withdrawn from the school endowment and other provincial lands, of an approximately equal value, will be selected and designated as school lands in lieu thereof.

In order to give veterans returning from overseas an opportunity, applications for school lands will be accepted until April 15th, 1946. Where more than one application is received covering the same parcel of land, preference is to be given to veterans living within the district wherein the land is situated. Where no preference is granted, disposition will be made by drawing lots.

FORESTRY

The demand, together with favourable prices for our lumber which prevailed during the war years and resulted in production reaching peak levels despite a shortage of man power, has, if anything, increased due to the necessity for building materials, pit props and mine timbers. The heavy current requirements, together with the release of men from the armed forces to the industry will mean higher production still, and while the figures for the fiscal year under review were on a par with those of the previous year, production for 1946-47 should reach an all time high for the Province.

It is unfortunate that with a good market apparently insured for some time our present supply of timber does not warrant the increased production, and it will probably be necessary in the immediate future to take active steps to curtail it. If the present rate of depletion through cutting and fire loss is allowed to continue it would seriously jeopardize not only future production but the future prosperity of the Province through irreparable damage to our watersheds, the reduction of our forest cover to a state where soil erosion and drifting cannot be controlled and large tracts of land, particularly in the Peace River country, will become semi-arid areas. A timely warning in this connection is given in the report of our Chief Timber Inspector, who gives two specific instances covering areas in the Peace River country, one where the watershed has already been destroyed mainly through ruthless and indiscriminate burning by settlers and the

other where if precautionary measures are not taken immediately a similar situation will arise.

The report of the sub-committee of the Alberta Post War Reconstruction Committee appreciates the vital need for preserving our forest areas and water-sheds.

Now would appear to be the opportune time to implement some of the main findings and recommendations of the sub-committee particularly in regard to:

- (a) making a physical inventory of the forest resources of the Province;
- (b) expansion of fire prevention services;
- (c) instituting a large range programme of reforestation of cut over and burn over lands and afforestation of marginal and sub-marginal lands;
- (d) inauguration of a training programme for men already in the forestry service and those wishing to join it which would give courses in timber cruising, insect and disease control, reforestation, wild life, forest protection, etc.;
- (e) establishment of additional tree nurseries in different parts of the Province to enable a study to be made of the species most suitable for planting in the area to be supplied both from the commercial point of view, as well as providing forest cover and trees for farm planting.

LUMBER MANUFACTURED FROM TIMBER CUT ON PROVINCIAL AND
SCHOOL LANDS AND ON FOREST RESERVES

Fiscal Year	F.B.M.
1935-36	89,919,530
1936-37	104,492,420
1937-38	146,301,510
1938-39	122,450,579
1939-40	131,497,021
1940-41	185,752,504
1941-42	272,345,129
1942-43	228,703,425
1943-44	182,407,992
*1944-45	353,625,868
1945-46	273,259,563
Total	2,090,755,541

*This figure covers the period January 1st to March 31st, 1945.

RADIO

A greater standard of efficiency was in evidence in the operation of the detection and communication system during the past year. This can be attributed to more experienced personnel and the fact that all operating sets were thoroughly overhauled before the start of the season.

All radio equipped towers were in operation early in May. One new installation was made at the Coliseum lookout situated on the north-west quarter of section 10, township 41, range 15, west of the 5th Meridian, in order to provide a link between the radio and telephone systems in the Clearwater Reserve.

Successful experiments have been carried out by this Branch in dropping equipment and supplies from aircraft to fire crews. Various methods of packing and different types of parachutes were tried out and reliable techniques have been evolved.

FISH AND GAME

With the return of peace more people have been able to enjoy fishing and hunting than in recent years as is evidenced by the increased number of permits and licenses issued. We have also been able to give more attention to the conservation and propagation of our wild life and to extending our fish hatchery operations.

A pheasant rearing station was constructed and put into operation on a site in Brooks secured through the courtesy of the Eastern Irrigation District. The

site is well suited to the purpose, as there is a large pheasant population in the Brooks area which has simplified the collection of eggs. Results of the first season's operations are most gratifying, and a large number of young pheasants were released in various parts of the Province with the co-operation of the Alberta Fish and Game Association and their various locals.

In line with our plan to plant yearly sport fish rather than fry, fish rearing ponds have been constructed on the western outskirts of Calgary on a flat adjacent to the Bow River, the fry to be supplied from our Calgary fish hatchery.

The Game Advisory Council continues to make a valuable contribution to our fish and game administrations and their representation has been widened to include representatives of the farmers, Indians and the fur dealers, and it is hoped that registered trappers will be represented shortly.

Close liaison has been maintained with Dominion wild life officials and those of our neighbouring provinces to the mutual benefit of all concerned.

Through the efforts of the Alberta Fish and Game Association a most successful summer campaign was carried out during the year for the destruction of crows and magpies. A bounty on crow and magpie feet was paid by the Province through the association and their affiliated locals.

A new Game Act was passed at the last session of the Legislature incorporating a great many of the provisions previously contained in the regulations.

Poundage of commercial fish caught showed an increase of eleven per cent; value to fishermen an increase of seventy-seven per cent, and market value an increase of sixty-eight per cent over the previous year. The total weight caught was 8,584,005 pounds, with a value to the fishermen of \$742,098.48 and a market value of \$1,451,717.14. A keen export market and the high quality of our fish is responsible for the greatly enhanced market value. There were times during the year when the domestic market could not compete with the prices offered by exporters for whitefish and pickerel.

Despite high production and good prices the legitimate fishermen, particularly those in well settled districts, are having a hard time to make a good livelihood, as local residents attracted by the chance to make relatively easy money by winter fishing are taking out commercial licenses and with the poundage limitation the individual catch is comparatively small.

The survey of all lakes, to determine the number of fish they can nourish and still maintain a high quality, is being continued, and in several instances the limit has been curtailed.

Anglers enjoyed another good season with an improved catch over the previous year. Losses through flooding and drought were negligible, but there were severe losses through winter killing and a study of winter stream management is under way.

Good fall shooting was reported in most parts of the Province, there being a good supply of ducks and geese, though upland birds, particularly ruffed grouse, short tail grouse and Hungarian partridge, were very scarce and it will probably be necessary to enforce a closed season on the birds next year.

The big game population continues to increase with the exception of moose and antelope. Elk have become so plentiful that it has been necessary in some districts to open the season for both male and female to protect farm crops. Black and brown bear could also be shot anywhere in the Province without license owing to the damage they were causing to live stock particularly in the Peace River district.

Value of pelts taken was \$3,002,419.00, an increase of fifty per cent over the previous year despite a reduction of 284,569 in the number of animals pelted. Number of pelts taken was 1,411,571 as against 1,696,140 during 1944-45.

Better prices and an increase in the take of the so-called short haired fur accounted for the increase in value.

The administration of fur farmers was transferred to the Department of Agriculture at the close of the year. This is in line with the practice followed in other provinces to have fur farmers come within the purview of the department supervising live stock raisers.

MINING LANDS

Progress in the development of our mineral resources continues to be most encouraging. The production and value of more important minerals for 1945 were as follows: coal, 7,801,248 tons, valued at \$27,699,333; petroleum, 8,055,440 barrels, valued at \$13,169,692; natural gas, 43,746,338 Mcf., valued at \$2,187,367; and salt, 29,362 tons, valued at \$293,620.

Production of coal, the biggest industry outside of agriculture in our Province today, reached an all time high during 1945, and with our almost unlimited reserves and the improved man-power situation, the only limiting factor to continued expansion is the question of markets. The industry demonstrated during the war its ability to rise to the occasion by taking care of the vastly increased requirements necessary to run our war machine, and more recently to help out the eastern provinces during the United States coal strike. Surely if the industry is vital to Canada in time of war, a peace time national policy can be formulated to at least maintain production at its present level to insure orderly development of the industry and steady employment for our miners.

While production of petroleum decreased 733,286 during 1945 due to the normal decline in Turner Valley production, there is no cause for undue pessimism. Production outside of Turner Valley increased by 170,967 barrels and the hunt for new fields is being carried out on an extensive scale. Footage of wells drilled during 1945 shows a decrease of 54,401 feet, though there is an increase of 52,695 feet in wells drilled outside of Turner Valley. The following is detailed information in regard to footage drilled:

	1944	1945
Turner Valley	266,145	159,049
Exploiting other oil discoveries	87,513	125,120
Gas development	11,395	13,306
Wildcat	232,785	245,962
	<hr/> 597,838	<hr/> 543,437

The above information was taken from the reports of the Alberta Petroleum Industry, 1944-45, compiled by the Petroleum and Natural Gas Conservation Board, which give detailed statistics of production and wells drilled.

The opening up of additional natural gas fields, together with our already known reserves gives the Province a potential source of immense industrial expansion in the future. Besides its value as fuel, recent research discoveries have established natural gas a most valuable raw material for the synthetic production of gasoline, oil, rubber, plastics and other chemicals.

During the war Allied War Supplies Limited set up a nitrogen plant in Calgary and were able to produce ammonia and ammonium nitrates from natural gas cheaper than anywhere else in Canada. The policy of drilling and prospecting reservations to encourage exploration for petroleum and natural gas was continued during the fiscal year. Twelve drilling reservations were granted comprising 102,373 acres and fifty-one prospecting reservations covering 5,058,928 acres.

Further development of our huge bituminous sands awaits the construction of a pilot plant by the government to determine production costs. Meanwhile, research work is still being carried on by the Research Council, Abasand Oil Limited and Oil Sands Limited.

*Based on well-head valuation of 5c per Mcf.

Production of salt (sodium chloride) was 29,206 tons, an increase of 891 tons over the previous year.

TECHNICAL DIVISION

There were 1,233 notifications issued during the year covering an area of 183,425,587 acres more or less, as compared with 1,663 notifications covering 296,383,477 issued during the previous year. The decrease was due to a big drop in the number of homestead notifications, a natural sequence to the change in policy in 1939 when homesteads were discontinued and agricultural leases substituted in their place.

Details of notifications issued are as follows:

NOTIFICATIONS ISSUED		
Fiscal Year	Number of Notifications	Area, Acres
1930-31	23	3,019.710
1931-32	784	111,424.478
1932-33	1,260	178,887.233
1933-34	1,106	165,224.553
1934-35	2,006	324,611.398
1935-36	2,965	433,529.126
1936-37	2,231	325,615.379
1937-38	2,266	382,382.437
1938-39	2,874	517,435.896
1939-40	2,097	301,431.972
1940-41	2,058	295,649.119
1941-42	1,563	229,566.606
1942-43	1,516	229,699.519
1943-44	1,660	249,371.901
1944-45	1,663	296,393.477
1945-46	1,233	183,425.587
TOTALS	27,305	5,227,668.391
Increase in comparison with last year	400	112,967.890

Six exchanges of land in the Special Areas were completed during the year, including one between Credit Foncier Franco-Canadienne, Holland Canada Mortgage Company Limited, Administration and Trust Company, and the Crown whereby the Province acquired title to 110,408.38 acres of land owned by these companies in exchange for half the amount of Crown lands. By acquiring lands belonging to the companies which were scattered throughout the Special Areas, often completely surrounded by Crown lands, the administration of the Special Areas has been greatly facilitated.

Fifteen other exchanges were approved by Order in Council and title taken to the applicants' lands by the Crown, but notifications to the applicants for the Crown lands will not be issued until at least one year's residence has been completed. This action was deemed necessary to protect the Crown from persons whose sole purpose was to exchange lands for immediate resale rather than to make a home for themselves and to establish an economic unit.

Considerable difficulty has been experienced by the Department in obtaining the services of surveyors to do essential surveys in the outlying areas. Only one party went out during the year and it was unable to complete the survey of township 77, range 1, west of the 6th meridian, and township 78, range 2, west of the 6th meridian, the purpose of which was to lay out additional lands suitable for returned men. Sufficient lines were run, however, to enable plans to be prepared covering one hundred and forty quarter sections which are to be made available to veterans.

Considerable progress was made during the war years in making aerial surveys of the Province. Full details in this connection will be found in the report of the Technical Division. These surveys were effected by means of vertical, oblique and trimetrogon photography. The trimetrogon surveys were made by the United States army, and copies of these photographs were released to the Province by permission of the United States and Dominion governments.

The Dominion Government is at the present time undertaking extensive aerial surveys and we are negotiating with them to take care of our aerial survey programme. These aerial surveys will be of immense value in the preparation of maps and mosaics showing our natural resources.

Under The Mineral Taxation Act the following areas were established as producing areas during the year: Turner Valley, Kinsella, Viking, Vermilion, Medicine Hat-Redcliff, Crowsnest-Pincher, Lethbridge, Cascade.

The volume of work in this the first year for the department to be responsible for the assessment and taxation of all minerals in the Province, did not permit the inclusion in the assessment roll of all minerals liable to assessment. The minerals within the designated producing areas were assessed, and in addition all coal mines and all minerals within five-eighths of a mile of a producing mine.

Due to the large number of assessment appeals which were eventually compromised, the 1945 tax notices could not be mailed out until after the close of the fiscal year, and the collections therein will show up in next year's revenue.

Total collections for the year amounted to \$160,126.13, comprising acreage tax of \$160,054.33 and \$71.80, 1944 arrears of taxes on assessed arrears.

Mineral owners are taking advantage of the provision in The Mineral Taxation Act, 1945, whereby they may be relieved from payment of mineral taxes by transferring such minerals free and clear of all encumbrances to the Crown.

An amendment to The Provincial Lands Act, which came into force on April 6th, 1945, provides for the levying of a tax, similar to the unearned increment tax payable through the Land Titles Office on freehold property, on any assignment of an agreement for sale, lease, license or permit, etc., at the time of registration in the Department. The tax is ten per cent of the increase in value at the time of registration exclusive of cost of improvements and development work, over the preceding value as established in the last registered assignment. In the case of a first assignment the tax is based on the increase in value over the yearly rental and bonus or in the case of an agreement for sale, the increase over the sale price stated in the agreement for sale.

Revenue collected during the year amounted to \$4,333.56, but it is expected that this will increase in future years. While the tax came into force on April 6th it was not levied on assignments dated prior to April 6th if accompanied by affidavits verifying the date of assignments and submitted for registration in the Department before the 20th of June.

REGISTRATION DIVISION

The steady increase in the volume of work in the Department is reflected in the number of new files opened and the increase in both incoming and outgoing mail as outlined in the Registrar's report.

Good progress is being made in photographing old files with our Recordak equipment, operating efficiency has been increased, a greater number of films being "shot" with less staff. A revised Kardex card has been introduced which has considerably improved our index system.

STAFF.

I would like to take this opportunity of welcoming back all members of our staff who joined the armed services and have now returned to duty with the Department. It is my sincere hope that they will find in their future service with the Department a worth-while career. At the same time I would like to pay tribute to those members of the staff who carried on so ably during the war under most difficult and trying conditions.

J. HARVIE,
Deputy Minister.

SUMMARY OF OIL PRODUCTION IN ALBERTA BY CALENDAR YEARS

Quantities in Barrels of 35 Imperial Gallons

	1914-21	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	Total
TURNER VALLEY:																										
Limestone:										40,900	63,969	52,409	49,601	61,249	61,302	220,552	1,787,421	5,999,970	7,162,962	8,097,414	9,443,143	9,621,326	8,940,198	7,837,442	6,997,191	66,437,099
Oil Wells				1,689	169,008	203,725	284,595	410,448	908,411	1,275,202	1,281,341	802,108	717,154	734,891	650,149	451,396	311,549	150,542	88,101	75,602	88,064	74,587	46,465	37,427	8,398	8,770,852
Gas Wells				13,128	8,951	7,283	5,854						185,781	414,324	496,681	602,360	657,169	531,434	296,787	274,172	293,122	302,216	461,169	448,186	412,540	5,428,530
Natural Gasoline	76	9,237	8,060	2,932	2,926	2,609	38,808	70,910	73,181	50,897	26,936	21,757	23,915	22,307	18,903	13,011	10,589	9,192	8,431	7,309	6,014	5,806	4,865	3,209	3,932	493,540
Crude Oil recovered from above Limestone	56,599	6,559	1,943																							
Total	56,675	15,796	10,003	17,749	180,885	213,617	329,257	481,358	981,592	1,366,999	1,372,246	876,274	976,451	1,232,771	1,227,035	1,287,319	2,766,728	6,691,138	7,556,281	8,454,497	9,830,343	10,003,935	9,452,697	8,326,314	7,422,061	81,130,021
ARMELGRA—Heavy Crude																							462			462
CONRAD—Heavy Crude												562	546	561	195	1,480		615	2,073	3,444	4,393	1,653	1,882	24,733	143,696	168,429
DEL BONITA—Light Crude									2,839	1,873	10,362						1,642	6,383	3,633	4,746	2,894	2,780	200	9,366	4,091	30,861
DINA—Heavy Crude													803	152												37,352
KEHO—Light Crude																			348	1,648	416	477	2,640	6,296	28,321	40,146
LLOYDMINSTER—Heavy Crude																	655	3,064	2,074	351			2,205	628	8,977	
MOOSE DOME—Light Crude																			515		19,587	10,478	340	13,815	63,377	108,112
PRINCESS—Heavy Crude																							207			207
RAM RIVER—Heavy Crude																					11,626	10,107	8,928	3,835		328,711
RED COULEE—Light Crude										1,328	53,917	65,066	34,315	29,708	20,276	20,536	16,262	13,790	13,818	13,022	12,177					8,298
SKIFF—Heavy Crude							529	222	1,432	3,731					510	1,564	310									
TABER—Heavy Crude																		600	15,098	3,720	5,600	29,819	88,735	148,638	135,000	427,210
TILLEY—Heavy Crude																							5,718	5,065	3,137	14,513
VERMILION—Heavy Crude																										
WAINWRIGHT—Heavy Crude						5,981	2,526	7,952	12,332	9,739	7,142	7,003	5,276	11,779	14,638	15,057	13,459	12,985	202	10,817	22,051	56,819	93,258	234,603	238,358	656,108
JUMPING POUND																			11,624	7,527	11,733	14,510	18,136	17,154	16,472	223,025
Total						5,981	3,055	8,174	17,931	69,260	82,570	41,880	36,333	33,278	36,933	33,109	30,146	51,963	37,211	40,710	78,300	132,361	221,851	462,414	633,379	2,056,837
ALBERTA TOTALS	56,675	15,796	10,003	17,749	180,885	219,598	332,312	489,532	999,523	1,436,259	1,454,816	918,154	1,012,784	1,266,049	1,263,968	1,320,428	2,796,874	6,743,101	7,593,492	8,495,207	9,908,643	10,136,296	9,674,548	8,788,726	8,055,440	83,186,858
*VALUATIONS	\$ 218,200	\$ 64,047	\$ 41,333	\$ 88,095	\$ 717,271	\$ 914,707	\$1,529,477	\$1,727,824	\$3,424,021	\$4,557,473	\$3,977,788	\$2,606,907	\$2,694,310	\$3,031,446	\$2,856,029	\$2,918,730	\$4,913,960	\$8,639,488	\$9,289,580	\$10,503,249	\$13,809,708	\$15,517,266	\$15,724,518	\$14,468,061	\$13,169,692	\$137,453,180

NOTE: The dividing line between oil wells and gas wells is now on the basis of the gas/oil ratio of 30 Mcf. per barrel.

*Valuations are based on sales by primary producers.

Provincial and School Lands Administration

REPORT OF THE DIRECTOR OF LANDS, V. A. WOOD

April 1st, 1945, to March 31st, 1946

The Government Announcement of Plans for the Establishment of Veterans on Provincial Lands published on the 17th of September, 1945, has been well received by the veterans, and it is generally conceded that the Alberta Government Rehabilitation plan is one of the best in Canada.

The plan is divided into four classes as follows:

Provincial Lands: Any veteran who obtains a certificate from the Soldier Settlement and Veterans' Land Act may make application for a Veteran's Agricultural Lease for 320 acres of vacant Provincial Lands irrespective of his other holdings.

School Lands: Veterans who resided in Alberta at time of enlistment, who do not own any farm land and who obtain a certificate from the Soldier Settlement and Veterans' Land Act may make application for a Veteran's Agricultural Lease for 320 acres of school land.

Lands Cleared and Broken: The Government has entered into a contract for clearing and breaking of areas within the Province for the rehabilitation of veterans of World War II. It is the intention to issue leases within these areas similar to the Veterans' Agricultural Leases with the exception that the veteran will require to deliver to the Province in each year for seven years, subsequent to the issue of the lease, a one-third share of all crops harvested from the land. The Government has selected and reserved three areas covering approximately eight townships in the vicinity of the Hamlet of Tangent in the Peace River district to be cleared and broken under contract.

Lands Requiring Irrigation: At the present time certain proposed irrigation projects are being investigated and if found feasible and work is undertaken for the development of the project, the Provincial Lands within the irrigation project will be made available by sale at a nominal price of \$10.00 to veterans on the basis of a maximum of 160 acres to an applicant. The veteran in this case will also be required to pay all taxes, water rates and other charges against the land.

With a view to assisting persons still on active service to acquire land, it was decided to allow them or their immediate relatives to make application on their behalf to have 320 acres of Provincial Land reserved for them until they are discharged from the forces.

As was anticipated, there has been a heavy rush of inquiries and applications for Agricultural Leases. During the fiscal year, 571 civilian applications have been received and since the 17th of September 595 veteran applications have been received. A great many inquiries have been received in connection with lands to be cleared and broken, but no applications for leases are as yet being accepted in these areas. Inquiries have also been received in connection with the irrigation lands, but it is not the intention to accept any applications until the irrigation projects are completed.

The following are some of the important Orders in Council passed during the fiscal year:

Order in Council 1209-45: Authority granted Minister of Lands and Mines to enter into agreement with D. D. Hartman to have certain areas cleared and broken and made ready for farming.

Order in Council 1480-5: Veterans' Agricultural Lease Regulations established.

Order in Council 1352-45: New Civilian Agricultural Lease Regulations established.

Order in Council 595-45: Establishing Fees for Grazing Leases.

Order in Council 597-45: New Grazing Lease Regulations established.

Order in Council 1805-45: Exchange of Lands for the Purpose of establishing an Economic Unit.

Order in Council 1171-45: All vacant Provincial and School Lands other than fractional areas available only for disposition to certified Veterans of World War II and to residents of Alberta who have been in continuous residence in Alberta since January 1st, 1944.

The Provincial Lands Act was amended by adding a new section 86A imposing a tax at the rate of 10% on the increase in value at the time of registration of an assignment of an agreement of sale, lease, permit or license of occupation.

It was also decided not to accept any applications for Cultivation and Grazing Leases on school lands until after the 15th of April, 1946. It was decided, however, to accept applications for Cultivation and Grazing Leases on Tax Recovery Lands irrespective of the area under cultivation and only to accept applications for Cultivation and Grazing Leases on Provincial Lands in cases where at least one-third of the total area applied for is already cultivated.

This Branch has been collecting registration fees in connection with notifications for title for the Land Titles Office, and during the year it was decided that this Branch would also collect consolidation fees in cases where Crown lands are bounded by a shore line and the registration will result in the disposal of the residue in any particular parcel of land.

In accordance with circular letter dated the 1st of May, 1945, issued by the Fish and Game Commissioner, 307 Miscellaneous Permits for Trappers' Cabins were issued during the fiscal year at an annual fee of \$1.00 for each cabin. The purpose of these permits is to allow trappers the privilege of remaining on their trappelines and to protect the same at all times of the year.

The wheat price was again fixed by the Canadian Wheat Board at \$1.25 per bushel, No. 1 Northern at Fort William and Vancouver. There was an open delivery of barley and oats as from 30th August and restrictions on marketing wheat were removed October 5th. Wheat seeding was completed in most parts of Alberta by June 9th. Cutting started around August 25th and threshing was completed by the end of October except in a few isolated areas chiefly in the north. The wheat yield was below average. The average wheat yield in the eastern half of the Province was 4.9 bushels per acre and in the western half 12.6 bushels per acre. Peace River yields were also disappointing, the average yield being 13 bushels per acre.

During the year the Canadian Wheat Board declared final payments on participation certificates in connection with wheat deliveries for the crop years 1940, 1941 and 1942, and this Department as landlord participated as follows:

1940	\$13,948.79
1941	5,069.16
1942	7,087.09
Total	<u>\$26,105.04</u>

These payments cover wheat deliveries from Provincial Lands, School Lands and lands within the Special Areas.

Land Agencies were maintained at Calgary and Peace River. The sub-agent at Athabasca, W. H. Soper, passed away on the 25th of June, and the office has remained closed since that date. It is expected that this sub-agency will be reopened in the near future. The other sub-agencies at Bonnyville, Grande Prairie, Hines Creek, Lac La Biche and Rocky Mountain House remained in operation.

The following is a summary of soil inspections in connection with Agricultural Leases (two permanent soil investigators):

Requests outstanding April 1st, 1945	142
Requests called during fiscal year	873
Reports received during fiscal year	512
Requests outstanding March 31st, 1946	503

Summary of inspections of Provincial, Grazing and School Lands (four inspectors):

Requests outstanding at April 1st, 1945	498
Requests called during fiscal year	1176
Reports received during fiscal year	1170
Requests outstanding at March 31st, 1946	504

While there are a large number of inspections outstanding as of March 31st, 1946, these outstanding inspections accumulated during the winter and spring months as there were very few inspections outstanding when the field work stopped in the late fall due to weather conditions.

During the fiscal year, 21 temporary sub-agencies were held by the field inspectors throughout the Province, at which 203 items of business were transacted.

During the year the Inspector of Collections was in the field from April 6th to December 12th and interviewed approximately 550 lessees and purchasers and collected \$40,000.00 on past due accounts. Other payments were undoubtedly made to the Department as a direct result of the Collector's interview. Considering the poor crops harvested throughout the Province, collections are considered satisfactory.

PROVINCIAL LANDS SALES:

	No.	Acres
Sales outstanding at April 1, 1945	215	14,180.50
New sales during fiscal year	136	7,088.10
Sales cancelled during fiscal year	3	216.01
Sales patented during fiscal year	119	7,107.86
Sales outstanding at March 31st, 1946	229	13,944.73

ACCRUED AREA LEASES:

Leases in force at April 1, 1945	498	42,473.36
Leases issued during fiscal year	139	13,299.17
Leases cancelled during fiscal year	180	21,879.37
Leases in force at March 31, 1946	457	33,893.16

AGRICULTURAL LEASES—CIVILIAN:

Leases in force at April 1, 1945	738	136,327.17
Leases issued during fiscal year	330	64,521.54
Leases cancelled during fiscal year	118	22,344.31
Leases in force at March 31, 1946	950	178,504.40

AGRICULTURAL LEASES—VETERAN:

Leases in force at April 1, 1945	40	9,143.87
Leases issued during fiscal year	2	480.00
Leases cancelled during fiscal year	38	8,663.87

LICENSES OF OCCUPATION (Provincial Lands):

Licenses in force at April 1, 1945	111	5,164.21
Licenses issued during fiscal year	13	281.62
Licenses cancelled during fiscal year	2	15.80
Licenses in force at March 31, 1946	122	5,430.03

MISCELLANEOUS LEASES (Provincial Lands):

(Recreational, Church Sites, Exhibition Sites, Sawmill Sites, Wharf Sites, etc.)		
Leases in force at April 1, 1945	127	10,094.81
Leases issued during fiscal year	18	525.04
Leases cancelled during fiscal year	7	306.72
Leases in force at March 31, 1946	138	10,413.13

TOWNSITE LEASES (Provincial Lands):

Leases in force at April 1, 1945	8	.....
Leases issued during fiscal year .....	.....	.....
Leases cancelled during fiscal year .....	.....	.....
Leases in force at March 31, 1946	8	.....

MINERAL SURFACE LEASES (Provincial Lands):

Leases in force at April 1, 1945	16	.....
Leases issued during fiscal year .....	.....	.....
Leases cancelled during fiscal year	1	.....
Leases in force at March 31, 1946	15	.....

FUR FARM LEASES (Provincial Lands):

Leases in force at April 1, 1945	10	.....
Leases issued during fiscal year	3	.....
Leases cancelled during fiscal year	1	.....
Leases in force at March 31, 1946	12	.....

	No.	Acres
IRRIGATION LEASES (Provincial Lands):		
Leases in force at April 1, 1945 .....	.....	.....
Leases issued during fiscal year	4	628.00
Leases cancelled during fiscal year .....	.....	.....
Leases in force at March 31, 1946	4	628.00
6 AND 10 YEAR CULTIVATION AND GRAZING LEASES		
(Provincial Lands):		
Leases in force at April 1, 1945	244	44,929.34
Leases issued during fiscal year	6	1,204.86
Leases cancelled during fiscal year	37	6,348.63
Leases in force at March 31, 1946	213	39,785.57
RENEWAL CULTIVATION AND GRAZING LEASES		
(Provincial Lands):		
Leases in force at April 1, 1945	156	27,799.02
Leases issued during fiscal year	2	480.00
Leases cancelled during fiscal year	3	517.60
Leases in force at March 31, 1946	155	27,761.42
21-YEAR CULTIVATION AND GRAZING LEASES		
(Provincial Lands):		
Leases in force at April 1, 1945	7	2,070.93
Leases issued during fiscal year .....	.....	.....
Leases cancelled during fiscal year .....	.....	.....
Leases in force at March 31, 1946	7	2,070.93
SPECIAL AREAS—6 YEAR CULTIVATION AND GRAZING		
LEASES (Provincial Lands):		
Leases in force at April 1, 1945	365	121,006.66
Leases issued during fiscal year	127	33,365.42
Leases cancelled during fiscal year	11	3,676.00
Leases in force at March 31, 1946	481	150,696.08
SPECIAL AREAS—20 YEAR CULTIVATION AND		
GRAZING LEASES (Provincial Lands):		
Leases in force at April 1, 1945	183	50,564.68
Leases issued during fiscal year	55	14,457.21
Leases cancelled during fiscal year	5	1,320.55
Leases in force at March 31, 1946	233	63,701.34
NEW 6 YEAR CULTIVATION AND GRAZING LEASES		
(S.E. of Province):		
Leases in force at April 1, 1945	78	16,400.72
Leases issued during fiscal year	5	1,283.00
Leases cancelled during fiscal year	4	798.26
Leases in force at March 31, 1946	79	16,885.46
Homesteads and Soldier grant entries cancelled	449	.....
Applications for patent received	634	.....
Notifications for title issued including homesteads converted to sales	882	.....
Applications for title on hand as at 1-4-46	2005	.....
Assignments registered	226	.....
Misc. Permits, building sites on trap lines	307	.....
Misc. Squatters Permits	354	.....
Grazing Permits issued	2655	504,875.67
Cultivation Permits issued	202	3,857.00
Hay Permits issued	1532	.....
No. of tons of Hay cut	15,316	.....
Hay Seizures	2	.....
Number of tons of Hay cut	11	.....

The new grazing rental policy inaugurated in January, 1945, has been well received by the ranchers in general. Most of the complaints received regarding the carrying capacity as set by the Department have been investigated by the Grazing Appraiser and adjustments made where necessary.

The price of all grades of cattle on the Calgary Stockyards from July to December (inclusive) for 1945, was 8.90c per lb. as compared to 8.88c per lb. in 1944. Owing to the small increase in the price of cattle no change was made in the grazing rental and tax rate.

At the beginning of the fiscal year there were thirteen Departmental Grazing Reserves and Community Pastures in operation and two in the process of formation.

During the year the Redcliff North Grazing Reserve was discontinued, and it is proposed to divide it up and lease it to the former users of the land. During the fiscal year the Hilda District Grazing Association, the Many Island Lake Grazing Association and the Bluefield Grazing Association (located south of Cypress Hills) were all issued twenty-year Grazing Leases for community pasture purposes. The Rocky Coulee pasture, which was operated by an association for the Department, has been reorganized, and a twenty-year Grazing Lease for

community pasture purposes has been issued in the name of the Rocky Coulee Grazing Association.

The following is a summary of the fifteen Grazing Reserves and Community Pastures in operation at the end of the fiscal year:

Grazing Reserves Operated by the Department (Permanent Caretakers).

1. *Vauxhall Provincial Grazing Reserve:* Area, 165,500 acres. Seventy-five miles of fencing on reserve. Additional help was employed during the year for range riding, building and repairing fences, excavating wells, building water troughs, erecting windmills and developing water supply. The central portions of the reserve, which were previously dry, are now supplied with water from a well 16 feet square and 30 feet deep, from which water is pumped by a windmill into a circular cement trough 40 feet in diameter and two feet deep. The fencing on this reserve is now practically complete with the exception of about three miles. Permits issued for summer grazing 111, covering 2,088 cattle, 185 horses and 15,889 sheep. Reserve used to full capacity.

2. *Blackfoot Provincial Grazing Reserve:* Area, 38,000 acres. Fifty miles of fencing on Reserve. Additional help was employed for range riding and building and repairing fences and corrals. A building was erected at tested pasture corrals to provide shelter for patrons and their horses at round-up time. Permits issued 115, covering 1,508 cattle and 244 horses. This Reserve was not used to capacity.

3. *Twin River Provincial Grazing Reserve:* Area, 20,500 acres. Twenty-four miles of fencing. Additional help was employed for building and repairing fences. Permits issued 52, covering 1,161 cattle and 53 horses. Reserve used to full capacity.

Grazing Leases Operated by Associations Under Permit
(Responsible for upkeep and care of stock)

1. *Tulliby Lake Provincial Reserve:* 22,000 acres. One permit issued, covering 300 cattle.

2. *Bowell West Provincial Grazing Reserve:* 8,600 acres. One permit issued, covering 142 cattle.

GRAZING RESERVES OPERATED UNDER LONG TERM LEASES BY ASSOCIATIONS

	Acres
1. Castle River Reserve	4,500
2. Fir Grove Reserve	3,600
3. Ross Lake Reserve	4,500
4. Barnwell Reserve	5,500
5. M.D. of Eureka Reserve	3,350
6. Pipeline Reserve	19,400
7. Rocky Coulee Reserve	4,450
8. Many Island Lake Reserve	15,450
9. Hilda District Reserve	24,800
10. Bluefield Reserve	11,600

LONG TERM GRAZING LEASES

	No.	Acres
Leases in force April 1st, 1945:		
Provincial Leases	1,844	2,517,679.00
Special Area Leases	930	1,511,216.00
Total	2,774	4,028,895.00
Leases issued	743	760,832.00
Area added to existing leases		38,984.00
Leases cancelled	371	420,806.00
Area withdrawn from existing leases		7,275.00
Leases in force March 31st, 1946:		
Provincial Leases	1,932	2,634,112.00
Special Area Leases	1,214	1,766,518.00
Total	3,146	4,400,630.00



The total revenue received for the fiscal year in connection with the administration of Provincial Lands, exclusive of Provincial Lands in the Special Areas, amounted to \$286,725.61, an advance of \$66,126.71 over last year. Details pertaining to this revenue are given in the report of the Accounting Division of this Department.

SCHOOL LANDS

Veterans of World War II who were residing in Alberta at time of enlistment and who do not own any farm land, may make application for 320 acres of vacant school land under the Agricultural Lease regulations. However, before granting an agricultural lease, such School Lands will be withdrawn from the School Endowment and other Provincial Lands will eventually be selected and set apart in lieu thereof. This gives veterans who are eligible an opportunity of obtaining valuable farm land in well settled districts, and in some instances enables them to obtain land adjacent to their homes where they may make use of their relatives' farm machinery and equipment.

In order that all veterans returning from Overseas may have an equal opportunity, it has been decided to accept more than one application for the same parcel of school land to the 15th of April next.

However, when making disposition of the land preference will be given to veterans residing within the district in which the land is situated. Where no preference is granted and more than one application is received for the same parcel of school land, disposition will be made at a drawing to take place on or immediately after April 15th next.

On account of high prices received for grain and stock, collections have again been very good.

There was one public auction of School Lands held during the fiscal year. Twelve parcels were sold at a total of \$17,691.81. In addition, five private sales were made including town lots.

The total revenue received on School Land Sales amounted to \$248,965.85, made up as follows:

Principal	\$180,555.66
Interest	68,410.19
New School Sales during fiscal year	17
School Sales cancelled during fiscal year	27
School Sales patented during fiscal year	242
School Sales in force at March 31, 1946	779
Assignments registered	51

MISCELLANEOUS LEASES (School Lands):

	No.	Acres
Leases in force at April 1, 1945	61	2,209.77
Leases issued during fiscal year	8	188.31
Leases cancelled during fiscal year		
Leases in force at March 31, 1946	69	2,398.08

LICENSES OF OCCUPATION (School Lands):

Leases in force at April 1, 1945	45	489.99
Leases issued during fiscal year	2	8.88
Leases cancelled during fiscal year		
Leases in force at March 31, 1946	47	498.87

IRRIGATION LEASES (School Lands):

Leases in force at April 1, 1945		
Leases issued during fiscal year	1	160.00
Leases cancelled during fiscal year		
Leases in force at March 31, 1946	1	160.00

6 AND 10 YEAR CULTIVATION AND GRAZING LEASES (School Lands):

Leases in force at April 1, 1945	1590	296,568.20
Leases issued during fiscal year	25	4,922.01
Leases cancelled during fiscal year	55	6,804.91
Leases in force at March 31, 1946	1560	294,685.30

DEPARTMENT OF LANDS AND MINES

SPECIAL AREAS—6 YEAR CULTIVATION AND GRAZING
LEASES (School Lands):

	No.	Acres
Leases in force at April 1, 1945.....	72	1,8447.68
Leases issued during fiscal year	9	1,553.95
Leases cancelled during fiscal year		
Leases in force at March 31, 1946.....	81	20,001.63

NEW 6 YEAR CULTIVATION AND GRAZING LEASES

(S.E. of Province):

Leases in force at April 1, 1945.....	1	160.00
Leases issued during fiscal year		
Leases cancelled during fiscal year	1	160.00
Leases in force at March 31, 1946.....		
Grazing Permits (School Lands) issued during fiscal year	2359	648,251.84
Cultivation Permits (School Lands) issued during fiscal year ..	34	700.75
Hay Permits (School Lands) issued during fiscal year	270	
Number of tons of hay cut	3336	
Hay Seizures (School Lands)		

Total revenue received on School Lands for the fiscal year is as follows:

Interest, Rentals, Royalties, etc	\$299,800.41
Principal	180,555.66
Total	<u>\$480,356.07</u>

Registration Division

REPORT OF THE REGISTRAR, C. B. KENWAY

The report for this year will be brief from necessity. Much of what was said last year applies to this year's work, and need not bore the reader by being repeated.

The work of the Division ran very smoothly throughout the whole year. There were few changes in personnel, and the number of staff was sufficient to adequately handle the increase of work, which amounted to approximately 20%. However, in March, with an average of 1,330 letters being received daily, the facilities of the stenographic pool were taxed considerably. The number of letters received and mailed for the past year is compared with the previous year in the following table:

Month	Letters Received		Letters Mailed		Total	
	1944-45	1945-46	1944-45	1945-46	1944-45	1945-46
April	14,095	20,032	13,324	21,797	27,419	41,829
May	16,943	14,944	18,094	17,213	35,037	32,157
June	17,134	16,683	15,454	19,606	32,588	36,289
July	12,797	15,735	51,009	16,271	63,806	32,006
August	12,597	15,011	46,511	36,648	59,090	51,659
September	13,158	14,606	21,961	38,449	35,119	53,055
October	13,656	14,225	17,362	26,783	31,018	41,008
November	11,807	15,637	21,184	25,988	32,991	41,625
December	13,512	17,416	21,091	23,184	34,603	40,600
January	12,764	16,242	27,754	39,770	40,518	56,012
February	11,595	15,159	27,016	33,353	38,611	48,512
March	24,954	33,255	30,652	29,652	55,606	62,907
Total	174,994	208,945	311,412	328,714	486,406	537,659
Monthly Average	14,582	17,412	25,951	27,393	40,533	44,805

From the foregoing, one can readily see that there was a marked increase in the number of letters received each month, averaging nearly 3,000 pieces more per month. This is equivalent to an increase of 19.3%, and is a good indication of the amount of extra work done, and approximately 46% greater than either of the years 1941-42 or 1942-43.

At this point, the young ladies in the mail cage deserve a well-earned compliment for efficiently handling their first half-million pieces of mail. They may be assured that their work is sincerely appreciated throughout the whole Department.

As mentioned in previous reports, any increase or decrease in the mail is immediately reflected in the amount of work to be done in every section of the Division, and the above increase of nearly 20% was effectively carried out by each section.

The loss by retirement of Mr. Joseph Gorton from the Records Section and the resignation of a transcriber placed extra work on the remaining three members with the result that transcription of township records was discontinued until the return of Mr. Barnard.

In the Recordak section good progress can be reported, as 381 one-hundred-foot films were exposed and developed as compared with 275 for the previous year. In view of the fact that only two persons were employed on this work for eleven months of the year, their record of 381 films is significant, when one realizes that only 275 films were "shot" the previous 12 months, with the extra assistance for part of the time by a second shift of two extra girls.

In common with the rest of the Division, the work of the Filing section has increased considerably. Files are being handled in greater numbers and quicker than in the past. "Pick-ups" and deliveries are now on an hourly basis.

Last year a new type of card was used in the Kardex that provided more information about files. In converting from the old to the new cards many errors, omissions and other discrepancies were found, that have since been rectified or attended to.

A marked increase in the number of new files opened is shown in the following table:

Kind of File	NUMBER OF FILES OPENED		
	1944-45	1945-46	Total
General Lands	2,201	3,690	104,118
Lands Personal	259	1,292	1,551
Grazing Lands	611	396	9,593
School Lands	214	486	12,686
Right of Entry	21	37	97
Timber Lands	683	842	8,942
Timber, Personal	1,274	1,604	2,878
Mining Lands	1,552	1,231	38,240
Mining Lands, School	7	8	13,192
Mining Lands, License	53	21	76
Mining Lands, Company	19	18	993
Mining Lands, General	14	16	30
Cabin .....	....	324	324
Total	6,910	9,965	192,720

The increase in new files opened is 44.2% over the previous year and more than double the number of two years ago.

During the past year the writer has not been able to give the supervision to the work of the Division to the extent to which he would like because of other special duties assigned to him. That he was able to spend this time on other duties has been due to the co-operation and loyalty of the staff, for which he is extremely grateful.

Forestry

REPORT OF THE DIRECTOR OF FORESTRY, T. F. BLEFGEN

The cessation of the second World War with victory for the Allies eased the great strain under which the nation has been for nearly six years, and the victory was suitably welcomed by all, and the prospect of the early return of our relatives, friends and fellow workers who laid down their burdens in civilian life to take up arms against the common enemy is looked forward to with great fervour.

The personnel of the Division who have been on military leave have been and are still being welcomed back, and it is hoped that those who are still on duty will soon return.

We who were unable to take up arms and left behind to keep the home fires burning and supply the food, munitions and many requirements of great armies, are proud to extend a heartfelt welcome to the returning forces and to express appreciation and thanks for a job well done.

To the relatives of those that made the extreme sacrifice, we offer our heartfelt sympathy.

During the period this bitter conflict was being waged our staff was greatly depleted and competent and experienced assistance was, in many cases, impossible to secure. This opportunity is taken to thank those who put forth every effort to carry on the work during the trying years and to assure them that their loyalty and untiring efforts are greatly appreciated.

The year under review shows a continuation from previous war years of the very strenuous and arduous duties thrust on this Division. The demands for protection of the forests when fire fighters were practically unprocureable and when the demands for products of the forests were extremely great, have necessitated that everyone give untiring effort.

The cessation of hostilities did not bring about the decrease in the demand for forest products as forecast in previous reports. The reverse has been the case, and the demand has increased especially for lumber, pit props and mine timbers.

The reason for this increase was not foreseen by a great many directly connected with the lumber trade. The great building boom that is going on throughout the Dominion and in the Republic to the south was not anticipated by the lumbermen and manufacturers, and as a result there has been a shortage of most building materials.

It is very doubtful, however, even if this great building activity had been anticipated, if conditions would have been better as the operators had been producing to capacity or as extensively as the shortage of labour would permit.

As a result of the great building activity mentioned, the unprecedented demand for nearly all building materials far exceeds the supply.

How long this condition will continue is difficult to forecast. However, well informed lumbermen are of the opinion that the great demand for homes and other buildings will continue for at least another year.

The demand for pit props and mine timber also continues very brisk. This condition is partly attributable to labour troubles in the coal mines in the Eastern United States. The prevailing strikes have resulted in a fuel shortage in the Eastern Provinces, necessitating the shipment of great quantities of coal as far east as Ontario.

Another reason for the greater demand for pit props from Provincial Lands is that shortly after the cessation of hostilities the production of mine timbers at

the Dominion Forest Experimental Station at Kananaskis by prisoners of war was discontinued and a number of the mines, especially those in the Drumheller coal field, were forced to secure their requirements from other sources. As a result pit props are now being shipped from greater distances, some from as far north as the Lac La Biche district.

The method of timber disposal inaugurated by the present Government in the Province of Saskatchewan has also had effect on the increased demand from the forests of Alberta as the Saskatchewan output has been decreased, and to a limited extent this has been met by shipping ties and lumber from Alberta forests.

The Order in Council granting permission to ship fire killed pulpwood for the manufacture of paper, mentioned in a previous report, is now being taken advantage of. Large quantities of this class of material are being cut and shipped to Ontario and to pulp mills in the United States.

The greater portion of this material is being shipped from the northern part of the Province where a previous market was not available, and disposal is in the nature of a salvage operation as it does not interfere with the requirements of the coal mines situated in Central and Southern Alberta.

The very heavy demands that have been made on the forests of this Province during the war years and which continue for buildings, crating, boxes and railway track ties cannot be indefinitely met without depleting our stands below a safe minimum for future requirements and adequate watershed protection.

It is very strongly recommended that a forest inventory be made at an early date to ascertain the quantity, quality and annual increment of the forests of the Province.

If and when such an inventory is made and it is found that the annual cutting and loss by fire and other causes exceeds the increment, and it is anticipated that they will, especially during the seven years immediately preceding, measures will have to be taken to rectify conditions. However, forest crops require a number of years to mature, and the beginning of conservative measures should not be delayed.

Most lumbermen have not changed during the past generation and can only see the immediate profit, not looking to the future; therefore, applications are being received for immature timber that is readily accessible, and when refused by reason of immaturity, pressure is brought to bear to obtain the timber regardless of the age and condition. However, we have been very successful in meeting this pressure so far, and operators are realizing more and more that an honest endeavour is being made to administer the resources for the benefit of all and not for a few.

We are pleased to report that the splendid co-operation we received from the Dominion Government Department of Agriculture Entomological Branch in the continuation of a forest insect survey in the Province continued during the year under review.

We are again pleased to report that this survey shows that no serious infestation of forest insects has developed during the past several years.

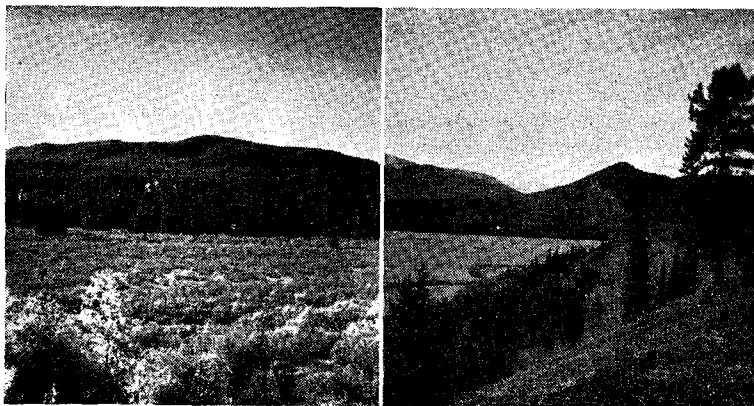
We wish to take this opportunity of thanking the Royal Canadian Mounted Police, the press and the members of different radio stations throughout the Province for the splendid co-operation they have given in forest protection, and to assure them that their assistance is greatly appreciated by the personnel of the Alberta Forest Service.

In view of the ever increasing value being amply demonstrated in the production of forest products and as a regulator of stream flow will be more fully recognized, and now that hostilities have ceased, it is hoped that appropria-

tions will be made available for more adequate protection of these valuable resources.

It cannot be emphasized too strongly that we cannot hope to give the forests the required protection against fire and other enemies with the inadequate appropriations that have been available since the Province assumed the administration of the natural resources.

It should be realized that the increased cost of labour and equipment also proves proportionately heavy on forest protection appropriations, with the result that the present moneys received cannot be spread out as well as before this increase became effective.



Forest cover on East Slope foothills

East Slope forest combines watershed protection, grazing and timber industry

The ranger districts in the Northern Alberta Forest District are far too large for effective control, and it is strongly recommended that as men become available the appropriations be increased to permit securing additional personnel so that these districts can be re-allocated and reduced in size to enable each ranger to carry out more effective patrols and give closer supervision to the many and varied uses being made of the forests in their districts.

The necessity of providing funds for the opening up of the northern districts by trails, roads, etc., so that the interior areas are more readily accessible in case of fire is again stressed.

This necessity has been brought forward on numerous occasions since the Province assumed the administration of the natural resources. However, during the depression years we were definitely informed that no money could be made available and during the war years the necessary labour could not be secured.

Now that hostilities have been successfully concluded and the extensive programme outlined for post-war reconstruction does not seem to be required to provide employment for the men that have and that will be returning from overseas, provision for the necessary funds for this very important work should be provided.

FOREST PROTECTION

The fire hazard during the spring and summer of 1945 was below normal in the forests on the east slope of the Rockies, although the snowfall during the previous winter was light.

As a result of the warm winds and bright sunny days the snow melted from the forest floor and had practically all disappeared early in April.

During the month of April light snow and rain fell at intervals, followed by spring rains which occurred early in May. However, the weather remained cool and cloudy, and it was nearly the middle of May before the weather became warm enough to give the new vegetation a start.

The summer weather was fair and warm with numerous showers over most districts, and in the Clearwater Forest very heavy rains occurred and a total of 16.88 inches of precipitation was recorded.

Similar conditions but with less moisture prevailed in the Brazeau-Athabasca Forest where precipitation was below normal, but showers occurred at intervals preventing the forest from becoming extremely dry, and when fires did occur these showers assisted greatly in their control. In the Northern Forest District conditions were not as favourable. A heavy fall of snow during the previous winter built up a fair reserve of moisture over most parts, with the exception of that portion of the Peace River Division north of the Peace River where no moisture storage has been apparent for the past three years. However, in most districts cool weather with light winds resulted in a late spring with snow melting slowly, and the ground was in good condition to absorb the moisture resulting from the melting snows.

During the latter part of June a number of fires occurred and spread rapidly. The spring rains did not occur until the latter part of June. They did, however, lower the fire hazard until late in July when hot, dry winds occurred causing the hazard to rise to a dangerous peak, and they helped considerably in providing a breathing spell for the staff and men on this work.

This high hazard continued until the middle of September, when rains occurred affording some relief, but again conditions became serious with a great many settlers' fires occurring and fire fighting was continuous until the last week in October when a fall of snow of from 3 to 8 inches occurred.

Although this snow prevented further spread of fires and starting of new ones, some of the earlier ones continued to burn in the ground.

We are again faced with the very serious problem of settlers who desire Agricultural Leases in the Northern Districts attempting to clear land by means of fire. It has been definitely determined that fires were started in some cases at a considerable distance from the area desired to burn, so as to avoid detection and prosecution. In a number of cases these fires are started prior to applications being made for the land, and very often when the hazard is high these spread over vast areas doing untold damage not only to the timber but to the humus and soil.

The policy of zoning certain areas in which no settlement should be permitted is long overdue, and it is strongly recommended that such a policy be implemented without further delay.

FIRE PROTECTION AND DETECTION

Detection remains as in former years dependent upon a system of lookouts and ranger patrols as a means of detecting fires in their incipient stages. A number of fires continue to be detected and suppressed by rangers on patrol before they reach sufficient size to be detected by the men on lookout stations.

In the Rocky Mountain Forest Reserve the coverage by lookouts is fair, but more stations are required to cover the blind spots.

In the Northern Forest District completion of the system already started which provides only a meagre coverage is still lacking. It is hoped that this condition may be remedied now that the war is over and men and funds should be available.

FIRE SUPPRESSION

During the fire season of 1945 the following fires were dealt with:

- 72 Class "A" or small fires (less than $\frac{1}{4}$ of an acre).
- 63 Class "B" fires (over $\frac{1}{4}$ acre up to 10 acres).
- 84 Class "C" fires (over 10 acres up to 500 acres).
- 65 Class "D" fires (over 500 acres).

COMPARISON OF FIRE LOSSES BY PERCENTAGE

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Campers	23.7	52.8	38.9	35.4	42.3	38.3	35.9	27.4	28.8	26.0	20.9	31.5	26.8	2.40	18.7
Smokers	3.2	5.3	13.5	11.7	9.3	9.7	4.5	3.6	5.0	4.8	2.2	3.3	7.5	6.5	8.8
Settlers	21.9	17.1	17.4	17.9	8.2	11.7	20.7	14.6	14.8	12.2	22.7	13.9	12.4	14.5	15.1
Railways	6.6	4.5	2.8	5.0	10.3	4.0	9.3	4.2	4.6	6.7	7.6	11.1	23.0	16.0	12.0
Lightning .....	.6	2.6	5.2	7.5	1.0	14.1	2.2	2.3	4.0	2.8	1.6	.9	.4	3.4	6.0
Industrial															
Operations	1.9	1.1	1.7	4.2	1.0	3.2	.8	1.4	1.4	.6	1.4	3.6	1.9	3.6	3.5
Incendiary	15.1	8.2	11.8	11.2	22.7	10.1	13.5	14.6	9.8	8.9	10.8	6.9	5.7	6.8	6.0
Public Works	1.4	.5	1.4	1.3	1.0	.4	.3	.8	.6	....	.2	.5	.4	....	.4
Unclassified	1.5	1.6	....	2.5	2.1	2.0	7.2	9.0	13.4	16.9	8.8	10.2	7.5	6.5	13.4
Unknown	24.1	6.3	7.3	3.3	2.1	6.5	5.6	22.1	17.6	21.1	23.8	18.1	14.4	18.7	16.1

RAILWAY FIRE LOSSES, CALENDAR YEAR 1945

This statement deals only with fires burning on forested territory under the supervision of the Alberta Forest Service, and which started within 300 feet of the centre line of the railway right-of-way.

Causes and number of fires:

Railway causes—Locomotives	36	
Employees .....	....
Sub-total	—	36
Other causes—Campers and travellers .....	....
Settlers	2	
Unknown	8	
Unclassified	2	
Sub-total	—	12
TOTAL .....	....	48

Number of acres burned:

Slashing or old burn	1,642 $\frac{1}{4}$
Timber land	2
Young growth	24
Not forested	10
TOTAL	1,678 $\frac{1}{4}$

Loss:

Timber	\$ 8.25
Young growth	15.00
Forest products .....	....
Other property	39.00
TOTAL	\$62.25

DEPARTMENT OF LANDS AND MINES

ANNUAL STATEMENT OF FIRES BY CAUSES, MONTHLY DISTRIBUTION, ETC., WITHIN AND OUTSIDE FOREST RESERVES, ALBERTA—CALENDAR YEAR, 1945

Cause	Number					P.C.	Damage	Area, Acres	Monthly Distribution												Fires Inside Provincial Forests		Fires Outside Provincial Forests			
									Convictions												No.	Area, Acres	No.	Area, Acres		
	A	B	C	D	Tot.				January	February	March	April	May	June	July	August	September	October	November	December						
Industrial	21	13	10	9	53	18.7	\$	29,644½	7	3	2	1	10	8	8	6	3	4	...	1	10	2½	43	29,642		
Camp-fires	2	6	13	4	25	8.8		6,654	...	...	...	...	11	2	5	7	2	...	...	...	2	342	23	6,312
Smokers	3	2	16	22	43	15.1		63,932	...	...	...	1	32	7	4	7	...	...	...	...	...	43	63,932	
Settlers	9	14	10	1	34	12.0		1,666½	...	...	...	2	12	4	6	4	...	6	...	...	4	6	30	1,660½
Railways	5	4	2	6	17	6.0		36,084	...	...	...	...	...	...	14	2	1	...	...	...	2	...	15	36,084
Lightning	5	1	3	1	10	3.5		1,029½	...	...	1	2	...	4	1	...	1	1	...	...	3	½	7	1,029
Operations	1	2	7	7	17	6.0		19,415	...	...	...	...	12	3	...	...	2	...	...	...	1	1	16	19,414
Incendiary	1	...	...	...	1	4		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Public Works	16	9	8	5	38	13.4		24,113	1	...	4	8	8	5	4	5	2	1	...	...	...	...	38	24,113
Unclassified	9	12	15	10	46	16.1		34,198	2	...	...	2	19	9	9	6	...	1	...	...	3	157	43	34,041
Unknown																										
TOTALS	72	63	84	65	284	100.0	\$	216,736½	10	3	7	16	92	42	52	35	11	15	...	1	58	49	25	509	259	216,227½
Per cent.	25.3	22.2	29.6	22.9		100.0			3.5	1.0	2.5	5.6	32.4	14.8	18.3	12.3	3.9	5.34	8.8	...	91.2	

ANNUAL SUMMARY OF FOREST FIRE LOSSES, ALBERTA—CALENDAR YEAR, 1945

FIRE CAUSES	NUMBER OF FIRES					LANDS AFFECTED								LOSS										SUPPRESSION COSTS		
						Ownership		AREA	CONDITION				TIMBER (MERCHANTABLE AND CUT-OVER)						Loss of Timber	Loss of Young Growth	Loss of Other Property	Total Loss	Ranger Service	Other Expenditures	Total	
	Public, Acres	Private, Acres	Merchantable Timber, Acres	Cut-over Timber, Acres	Young Growth, Acres	Not Forested, Acres	SALVABLE			UNSAVABLE																
							A	B	C	D	Total, Acres	Saw-timber, M.ft.B.M.	Other, Cords	Depreciation	Saw-timber, M.ft.B.M.	Other, Cords	Loss									
FIRES WITHIN FOREST RESERVES																										
Campers	8	2			10	2½		2½	2			½					2	\$ 5.50	\$ 5.50			\$ 5.50	\$ 76.79	\$ 1.20	\$ 77.99	
Smokers	1		1		2	342		342	140		80	122				25	7,000	2,650.00	2,650.00	200.00		2,850.00	87.32	586.12	673.44	
Settlers																										
Railways	1	3			4	6		6	2		3	1					11	8.25	8.25			8.25	81.65	7.25	88.90	
Lightning	2				2																		6.28		6.28	
Industrial Operations	2	1			3	½		½				½										1.25	10.39		10.39	
Incendiary		1			1	1		1			1											18.47	14.00		32.47	
Public Works																										
Unclassified																										
Unknown		2	1		3	157		157	½	4	90	62½					4	3.00	3.00	350.00		353.00	141.96	363.36	705.32	
TOTALS	14	9	2		25	509		509	144½	4	174	186½					7,017	\$ 2,666.75	\$ 2,666.75	\$ 551.25		\$ 3,218.00	\$ 422.86	\$ 1,171.93	\$ 1,594.79	
FIRES OUTSIDE FOREST RESERVES																										
Campers	13	11	10	9	43	29,271½	370½	29,642	2,977½		10,868	15,976	37		\$ 18.50	1,434	11,724	\$ 10,643.00	\$ 8,378.88	\$ 23,324.38	\$ 2.50	\$ 31,705.76	\$ 773.52	\$ 8,358.05	\$ 9,131.57	
Smokers	1	6	12	4	23	6,215	97	6,312	636	876	725	4,075				41½	3,364	3,068.00	3,066.31	1,612.50	5,953.00	10,631.81	357.19	4,781.71	5,138.90	
Settlers	3	2	16	22	43	55,819	8,113	63,932	1,885	1,320	7,785	52,942	500		507.00	768	23,875	17,071.00	14,069.55	8,687.00	394.60	23,151.15	963.06	10,451.54	11,414.60	
Railways	8	11	10	1	30	764½	896	1,660½			21	1,639½					20	15.00	15.00			15.00	43.90	82.67	126.60	
Lightning	3	4	2	6	15	36,084		36,084	18,142		6,515	11,427				22,522	121,385	136,086.50	68,044.74	46,573.75		114,618.49	639.17	10,449.59	11,088.76	
Industrial Operations	3		3	1	7	1,029		1,029	120	30	59	820	80		20.00		150	132.50	127.50	127.50		255.00	117.30	357.45	474.75	
Incendiary	1	1	7	7	16	17,573	1,841	19,414	1,800	180	7,060	10,374	311		.75	100	6,360	4,023.75	2,261.25	8,435.00	430.00	11,126.25	234.72	4,724.23	4,958.95	
Public Works	1				1																					
Unclassified	16	9	8	5	38	22,790½	1,322½	24,113	488½	1,000	10,240	12,384½	5			509½	1,630	1,897.00	1,417.00	4,233.50	950.00	6,600.50	567.27	9,340.90	9,908.17	
Unknown	9	10	14	10	43	32,648	1,393	34,041	3,591½	2,100	9,730½	18,619	250		245.00	3,787	42,560	35,894.00	32,948.50	23,501.15	4,010.00	60,459.65	666.68	7,272.48	7,939.16	
																		Miscellaneous Expenditure							2,225.28	2,225.28
TOTALS	58	54	82	65	259	202,194½	14,033	216,227½	29,640½	5,506	53,004	128,077	1,183		\$ 791.25	29,162	211,072	\$208,830.75	\$130,328.73	\$116,494.78	\$ 11,740.10	\$ 258,563.61	\$ 4,362.84	\$ 58,043.90	\$ 62,406.74	
FIRES WITHIN AND WITHOUT FOREST RESERVES																										
Campers	21	13	10	9	53	29,274	370½	29,644½	2,979½		10,868½	15,796½	37		\$ 18.50	1,434	11,730	\$ 10,648.50	\$ 8,384.38	\$ 23,324.38	\$ 2.50	\$ 31,711.26	\$ 850.31	\$ 8,359.25	\$ 9,209.56	
Smokers	2	6	13	4	25	6,557	97	6,654	776	876	805	4,197				66½	10,364	5,718.00	5,716.31	1,812.50	5,953.00	13,481.81	444.51	5,367.83	5,812.34	
Settlers	3	2	16	22	43	55,819	8,113	63,932	1,885	1,320	7,785	52,942	500		507.00	768	23,875	17,071.00	14,069.55	8,687.00	394.60	23,151.15	963.06	10,451.54	11,414.60	
Railways	9	14	10	1	34	770½	896	1,666½		24	24	1,640½					31	23.25	23.25			23.25	125.58	89.92	215.50	
Lightning	5	4	2	6	17	36,084		36,084	18,142		6,515	11,427				22,522	121,385	136,086.50	68,044.74	46,573.75		114,618.49	645.45	10,449.59	11,095.04	
Industrial Operations	5	1	3	1	10	1,029½		1,029½	120	30	59	820½	80		20.00		150	132.50	127.50	127.50		255.00	127.69	357.45	485.14	
Incendiary	1	2	7	7	17	17,574	1,841	19,415	1,800	180	7,061	10,374	311		.75	100	6,360	4,023.75	2,261.25	8,436.25	430.00	11,127.50	253.19	4,738.23	4,991.42	
Public Works	1				1																					
Unclassified	16	9	8	5	38	22,790½	1,322½	24,113	488½	1,000	10,240	12,384½	5			509½	1,630	1,897.00	1,417.00	4,233.50	950.00	6,600.50	567.27	9,340.90	9,908.17	
Unknown	9	12	15	10	46	32,805	1,393	34,198	3,592	2,104	9,820½	18,681½	250		245.00	3,787	42,564	35,897.00	32,951.50	23,851.15	4,010.00	60,812.65	808.64	7,835.84	8,644.48	
																		Miscellaneous Expenditure							2,225.28	2,225.28
TOTALS	72	63	84	65	284	202,703½	14,033	216,736½	29,785	5,510	53,178	128,263½	1,183		\$ 791.25	29,187	218,089	\$211,497.50	\$132,995.48	\$117,046.03	\$ 11,740.10	\$ 261,781.61	\$ 4,785.70	\$ 59,215.83	\$ 64,001.53	
SUMMARY BY DIVISIONS																										
N.A.F.D.	49	49	80	65	243	201,881½	14,032½	215,914	29,639½	5,426	52,973	127,875½	1,183		\$ 791.25	29,112	211,022	\$208,639.25	\$130,174.73	\$116,457.28	\$ 11,740.10	\$ 258,372.11	\$ 4,218.83	\$ 55,175.20	\$ 59,394.03	
Outside Reserves	9	5	2		16	313	½	313½	1	80	31	201½				50	50	191.50	154.00	37.50		191.50	144.01	643.42	787.43	
Clearwater	2				2	3		3			3															
Crowsnest-Bow	6		2		8	494		494	140		170	184				25	7,000	2,650.00	2,650.00	550.00		3,200.00	198.25	1,149.48	1,347.73	
Brazeau-Athabaska	6	9			15	12		12	4½	4	1	2½					17	16.75	16.75	1.25		18.00	224.61	22.45	247.06	
Cypress Hills																										
																		Miscellaneous Expenditure							2,225.28	2,225.28
TOTALS	72	63	84	65	284	202,703½	14,033	216,736½	29,785	5,510	53,178	128,263½	1,183		\$ 791.25	29,187	218,089	\$211,497.50	\$132,995.48	\$117,046.03	\$ 11,740.10	\$ 261,781.61	\$ 4,785.70	\$ 59,215.83	\$ 64,001.53	

M.ft.B.M.—Thousand feet board measure.
*N.A.F.D.—Northern Alberta Forest District

SUMMARY SHOWING TOTAL NUMBER OF FIRES AND BURNT OVER AREA
FROM 1931 TO 1945, INCLUSIVE

Year	Total No. of Fires	Total Acreage	Not Forested	Net Acreage
1931	622	604,876.12	209,064.75	395,811.37
1932	379	136,117.89	68,253.42	67,864.47
1933	288	93,765.00	30,955.88	62,809.12
1934	240	58,870.00	21,656.50	37,213.50
1935	97	6,319.75	3,267.75	3,052.00
1936	248	204,454.00	46,534.00	157,920.00
1937	375	835,259.00	155,069.50	680,189.50
1938	521	1,758,345.50	842,384.00	915,961.50
1939	499	429,139.25	159,774.50	269,364.75
1940	313	474,244.25	108,597.50	365,646.75
1941	445	1,355,424.50	459,475.00	895,949.50
1942	215	325,815.75	182,208.25	143,607.50
1943	265	515,149.25	409,503.50	105,645.75
1944	325	722,658.00	273,186.25	449,471.75
1945	284	216,736.50	128,263.50	88,473.00
	5,116	7,737,174.76	3,098,194.30	4,638,980.46

Radio equipped lookout stations were in operation before the commencement of the fire season, and were of great assistance in reporting fires in the Northern Forest District.

Experiments in the development of parachutes made from burlap suitable for dropping equipment and supplies to fire fighting crews have been carried out by the Radio Superintendent. However, further experiments along this line are no longer necessary now that surplus war supplies are available.

FOREST ADMINISTRATION

Provincial Forest Reserves:

The unprecedented demand for products of the forests continued to be very heavy and numerous applications for timber were received and dealt with.

The shortage of labour in the woods continued to be acute, and many operators were unable, by reason of this shortage, to work to capacity.

The demand for mine timber increased during the past season as stock piles, accumulated during the time the Dominion Government paid a bonus for the cutting of mine props, were diminishing.

TIMBER CUT UNDER PERMIT, ALBERTA FOREST RESERVES—FISCAL YEAR 1945-46

	Cypress Hills	Crownest- Bow River	Clearwater	Brazau- Athabaska	Totals
Number of permits	239	140	36	32	447
Fuelwood, dry (cords)	358	678	1,070	14	2,120
Fuelwood, green (cords)			900	10	910
Mine timber, dry (lineal feet)		464,926		251,785	716,711
Mine timber, green (lineal feet)			70,000	2,199	72,199
Lagging (lineal feet)		55,000	15,000		70,000
Fence posts	19,335	2,300	323	56	22,014
Saw logs (F.B.M.)	13,875	142,000			155,875
Round timber (pieces)	27,327				27,327
Round timber (lineal feet)	741				741
Fence droppers (pieces)		1,200			1,200
Fence Rails (pieces)		10,891	703	303	11,897
Telephone poles (lineal feet)		42,500			42,500
Railways ties				1,355	1,355
Mine ties (lineal feet)					
Building Logs (lineal feet)		10,533	6,535	5,394	22,462
Piling (lineal feet)				1,080	1,080
Roof Poles		198	12		210

TIMBER OPERATIONS ON FOREST RESERVES TIMBER SALE FOR THE PERIOD
APRIL 1st, 1945, TO MARCH 31st, 1946

	Crowsnest- Bow River	Clearwater	Brazzau- Athabaska	Totals
Number of active operations	40	29	55	124
Lumber, feet board measure	7,029,780	5,275,682	15,067,341	27,372,803
Railway ties		15,207	373,700	388,907
Mine timber (lineal feet)	735,391	795,233	399,371	1,929,995
Lagging (lineal feet)	378,687	111,154		489,841
Telegraph and Telephone Poles (lin. ft.) and power poles		2,250	6,735	8,985
Building logs and culvert timber (lineal feet)		4,000		4,000
Mine ties (lineal feet)			51,572	51,572
Fence Rails		374		374
Cordwood	255			255
Slabs (cords)			1,079½	1,079½
Lath		27,850		27,850

Provincial Lands:

In spite of the return of a great number of men from overseas war service, the labour shortage mitigated against a much greater volume of timber being manufactured.

Prisoners of war were utilized on a number of operations, and although this class of labour is not as satisfactory as Canadian woodsmen, they helped greatly in relieving the shortage especially on the larger operations.

The smaller operators, that is, some of those operating Timber Berths and Special Permits, were not as greatly handicapped by the lack of labour, as relatives and neighbours were employed, and as a result these smaller operations contributed to a total output that constitutes an all time record for the Province.

STATEMENT OF TIMBER OPERATIONS FOR THE PERIOD APRIL/45 TO MARCH 31/46,
ON PROVINCIAL LANDS IN THE EDMONTON DISTRICT AND IN THE
CALGARY AND PEACE RIVER LAND AGENCIES

	Head Office, Edmonton District	Calgary District	Totals
(a) OPERATIONS ON LICENSE TIMBER BERTHS:			
Number of active operations	109	12	121
Lumber, feet, board measure	92,568,294	3,390,538	95,958,832
Railway ties	344,798	506	345,304
Switch ties	2,353		2,353
Slabs, cords		118	118
Lath	637,000		637,000
Building logs, lineal feet	17,970		17,970
Cordwood	60		60
Telegraph and telephone poles (lin. ft.)			
(b) OPERATIONS ON TIMBER PERMIT BERTHS:			
Number of active operations	351	70	421
Lumber, feet, board measure	83,340,158	12,507,081	95,847,239
Railway ties	943,247	191,628	1,134,875
Piling, lineal feet			
Mine timber, lineal feet	248,556	180,155	428,711
Lath	222,220	705,500	927,720
Lagging, lineal feet	38,600	8,7000	125,600
Telegraph and telephone poles (lin. ft.)	46,800	12,485	59,285
Building logs and culvert timber (lin. ft.)	39,670	91,798	131,468
Mine ties, lineal feet		1,200	1,200
Fuelwood, cords		15	15
Fence posts		12,540	12,540
Slabs, cords		40	40
Stub poles		3,015	3,015
(c) OPERATIONS UNDER SPECIAL TIMBER PERMITS:			
(Sec. 68 of the Timber Regulations)			
Number of active operations	705	124	829
Lumber, feet, board measure	34,480,467	2,914,714	37,395,181
Railway ties	297,338	104,134	401,274
Piling, lineal feet	1,710		1,710
Telegraph and telephone poles (lin. ft.)	3,010	16,098	19,108
Building logs and culvert timber (lin. ft.)			
Building logs and L.F.	222,181		222,181
Fence posts	26,608		26,608

Mine ties, lineal feet .....	.....	.....	.....
Lath .....	.....	.....	.....
Slabs, cords .....	.....	25	25
Stub poles, lineal feet	7,509	.....	7,509
Mine timber	223,351	26,083	249,434
Fence rails, lineal feet	1,376	.....	1,376
Switch ties	145	.....	145
Lagging, cords	106	.....	106
Cordwood	233½	.....	233½
Shingle bolts, cards	150	.....	150

* (d) PROVINCIAL LANDS TIMBER PERMITS
ISSUED AUTHORIZING THE CUTTING
OF MATERIAL SHOWN HEREUNDER:

	Edmonton	Calgary	Peace River	Total
Number of permits issued	1,184	168	756	2,108
Building logs, lineal feet	35,169	10,960	47,025	92,884
Piling, lineal feet	13,100	.....	22,655	35,755
Mining timber, lineal feet	409,132	1,392,750	3,600	1,805,482
Telephone poles, lineal feet	67,166	1,200	200	68,566
Lumber, feet, board measure	6,617,005	157,000	5,323,548	12,097,553
Fence posts	275,520	60,250	47,400	383,170
Roof poles	4,563	100	31,214	35,877
Fence rails	27,596	8,900	150,605	187,101
Cordwood, fuel	8,149	1,933	4,304	14,386
Shingles	53,000	.....	10,000	63,000
Railway ties	2,016	.....	.....	2,016
Pulpwood	40	.....	280	320
Cords shingle bolts .....	.....	.....	127	127

*The figures shown under this heading are the amounts authorized to be cut. The amounts actually cut under this heading are not available.

STATEMENT OF TIMBER OPERATIONS FOR THE PERIOD JANUARY 1, 1945, TO
MARCH 31, 1946, ON SCHOOL LANDS IN THE EDMONTON DISTRICT AND
IN THE CALGARY AND PEACE RIVER LAND AGENCIES

	Head Office, Edmonton Dist.	Calgary Agency	Peace River Agency	Totals
(a) OPERATIONS UNDER LICENSE TIMBER BERTHS:				
Number of active operations	3	1	.....	4
Lumber, feet board measure	943,043	3,399	.....	946,442
(b) OPERATIONS ON TIMBER PERMIT BERTHS:				
Number of active operations	14	1	.....	15
Lumber, feet board measure	1,168,404	3,099	.....	1,171,503
Building logs and culvert timber, lin. feet ..	2,593	.....	.....	2,593
(c) OPERATIONS UNDER SPECIAL TIMBER PERMITS:				
(Section 25(g) of the Timber Regulations)				
Number of active operations	54	12	.....	66
Lumber, feet board measure	882,382	184,779	.....	1,067,161
Railway ties	2,211	8,708	.....	10,919
Stub poles, lineal feet .....	.....	2,400	.....	2,400

* (d) SCHOOL LANDS TIMBER PERMITS
ISSUED AUTHORIZING THE CUTTING
OF MATERIAL SHOWN HEREUNDER:

Number of permits issued	295	25	35	355
Building logs, lineal feet	6,359	240	.....	6,599
Piling, lineal feet	7,500	.....	.....	7,500
Mine timber, lineal feet	26,500	8,600	.....	35,100
Telephone poles, lineal feet	1,500	42,000	.....	43,500
Lumber, feet board measure	1,007,149	21,325	218,500	1,246,974
Fence posts	15,600	1,800	.....	17,400
Roof poles	150	.....	40	190
Fence rails	2,550	2,050	.....	4,600
Cordwood, fuel	2,924	188	248	3,360
Shingle bolts, cords	30	.....	.....	30
Mine ties	350	.....	.....	350

*The figures shown under this heading are the amounts authorized to be cut. The amounts actually cut under this heading are not available.

SUMMARY OF TIMBER OPERATIONS ON PROVINCIAL AND SCHOOL LANDS FOR THE PERIOD APRIL 1, 1945, TO MARCH 31, 1946

	PROVINCIAL LANDS					SCHOOL LANDS					FOREST RESERVES			
	License Timber Berths	Permit Timber Berths	Special Section 68	Other Permits	License Timber Berths	Permit Timber Berths	Special Section 25(g)	Other Permits	Timber Sales	Timber Permits	Totals			
Number of active operations	121	421	829	2,108	4	15	66	355	124	447	4,490			
Lumber, feet, board measure	95,958,832	95,847,239	37,395,181	12,097,553	946,442	1,171,503	1,067,161	11,246,974	27,372,803	155,875	273,259,563			
Railway ties	345,304	1,134,875	401,274	2,016	.....	.....	10,919	.....	388,907	1,355	2,284,650			
Piling, lineal feet	.....	.....	1,710	35,755	.....	.....	.....	7,500	.....	1,080	46,045			
Mine timber, lineal feet	.....	554,311	355,434	1,805,482	.....	.....	.....	35,100	2,412,836	858,910	6,029,073			
Telegraph and telephone poles, lineal feet	.....	59,285	19,108	68,566	.....	.....	.....	43,500	8,985	42,500	241,944			
Building logs and culvert timber, lineal feet	17,970	131,468	222,181	92,884	.....	2,593	.....	6,599	4,000	22,462	500,157			
Fence rails	.....	.....	1,376	187,101	.....	.....	.....	4,600	374	11,897	205,348			
Fence posts	.....	12,540	26,608	383,170	.....	.....	.....	.....	.....	22,014	461,732			
Fence droppers	.....	.....	.....	.....	.....	.....	.....	17,400	.....	1,200	1,200			
Roof poles	.....	.....	.....	35,877	.....	.....	.....	190	.....	210	36,277			
Fuelwood, cords	60	15	233 1/2	14,386	.....	.....	.....	3,360	255	3,030	21,339 1/2			
Slabs, cords	118	40	25	.....	.....	.....	.....	.....	1,079 1/2	.....	1,262 1/2			
Mine ties, lineal feet	.....	1,200	.....	.....	.....	.....	.....	350	51,572	.....	53,122			
Shingles	.....	.....	.....	63,000	.....	.....	.....	.....	.....	.....	63,000			
Shingles bolts, cords	.....	.....	150	127	.....	.....	.....	.....	.....	.....	307			
Lath	637,000	927,720	.....	.....	.....	.....	.....	30	.....	.....	1,592,570			
Round timber, pieces	.....	.....	.....	100	.....	.....	.....	.....	27,850	.....	27,327			
Switch ties	.....	.....	145	.....	.....	.....	.....	.....	.....	.....	27,327			
Stub poles, lineal feet	2,353	3,015	7,509	.....	.....	.....	2,400	.....	.....	.....	2,498			
Pulpwood, cords	.....	.....	.....	320	.....	.....	.....	.....	.....	.....	12,924			
Round timber, lineal feet	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	320			
Number of inspection reports submitted by timber inspectors	.....	.....	.....	.....	.....	.....	.....	.....	.....	741	741			
Number of timber seizures made	.....	.....	.....	.....	.....	.....	.....	.....	2,914	.....	2,914			
	.....	.....	.....	.....	.....	.....	.....	.....	189	.....	189			

GRAZING

Following the previous very favourable winter most stock entered the different grazing divisions in fair shape, and due to the exceptionally good forage conditions the stock were driven off in the fall in very good condition.

Owing to faulty distribution small areas on some districts are reported to be over grazed, but this condition could not be attributed to over stocking but to poor distribution.

The Castle River Division in the Crowsnest Forest was not utilized to capacity, as some of the regular permittees had lost quite heavily during the season of 1944. These losses were largely attributed to predatory animals, but it is reported that the inexperience of the herders then employed was a contributing factor.

In the Cypress Hills Forest conditions were not as favourable in the spring of the year as in the mountains owing to the lack of moisture, as this was the third successive dry year experienced in that locality and the ground moisture was inadequate to provide vegetation with an early start. Conditions improved, however, as the result of showers and most stock left the forest in good condition in the fall.

An early snowfall is reported to have been the cause of some shrinkage in the weight of stock on this forest, but despite this loss, which was not serious, a great number of cattle were shipped direct without further conditioning.

GRAZING STATEMENT—ALBERTA FOREST SERVICE, 1945-46

Forest	No. of Permits	No. of Horses	No. of Cattle	No. of Sheep
Cypress Hills	61	342	2,845	.....
Crowsnest-Bow River	288	1,210	21,084	4,800
Clearwater	88	619	385	.....
Brazeau-Athabaska	143	636	124	.....
TOTALS	580	2,807	24,438	4,800

COMPARATIVE STATEMENT, GRAZING—ALBERTA FOREST SERVICE

	1931	1932	1933	1934	1935	1936	1937	1938
Number of permits	456	606	493	517	533	497	529	437
Number of cattle	15,041	20,086	20,230	22,557	25,097	23,407	18,921	22,280
Number of horses	3,417	3,377	3,185	2,541	2,207	2,441	3,418	3,024
Number of sheep	4,379	7,465	6,705	3,078	4,114	5,443	3,174	4,791
	1939	1940	1941	1942	1943	1944	1945	Totals
Number of permits	482	435	479	507	527	545	580	7,623
Number of cattle	22,386	23,831	22,451	22,857	23,612	24,739	24,438	331,933
Number of horses	2,731	3,194	3,332	3,731	3,955	37,28	2,807	47,088
Number of sheep	6,883	3,954	4,745	4,722	3,542	5,334	4,800	73,329
								Aver.
								508.2
								22,128.9
								3,139.2
								4,221.9

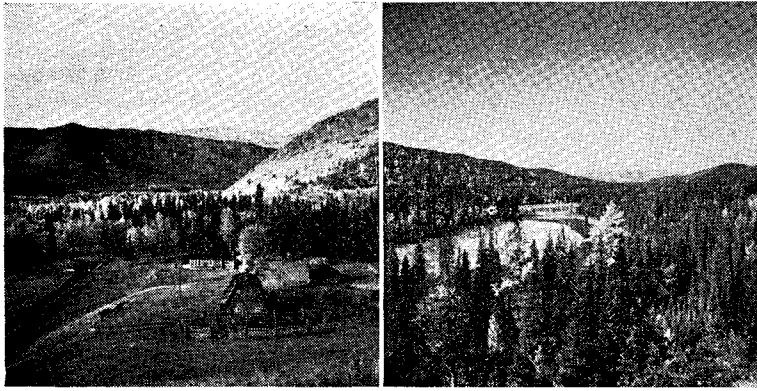
IMPROVEMENTS

The favourable fire season in the Crowsnest-Bow River Forest Reserve permitted the carrying out of a great deal of much needed improvement, and advantage was taken of the opportunity. As a result, a great number of man-days were spent in improving trails, roads, telephone lines, buildings, cabins and pasture fences.

Similar conditions prevailed on the Clearwater Forest. However, the precipitation and resulting high water did considerable damage to roads and trails where culverts and small bridges were washed out, necessitating a great deal of maintenance work.

Conditions in the Northern Forest District did not show material improvement, as the districts are much larger than on the east slope forests, resulting in very little opportunity for construction of new trails, cabins and other facilities for quicker and easier travel.

The proposed post-war reconstruction programme which was planned during the war years to take up the unemployment slack until conditions became normal had been looked forward to with eager anticipation. However, many jobs in



The Highwood Valley and Sentinel Ranger Station layout The Red Deer River Valley in the foothills

construction and other lines of endeavour preclude the possibility of any such programme being inaugurated at least in the near future.

The old methods of road and trail building are out-moded by the use of power machinery, and it is strongly recommended that when small bulldozers and other suitable equipment become available provision be made to secure several units so that a start can be made in opening up presently inaccessible areas.

IMPROVEMENT STATEMENT											
NEW CONSTRUCTION PROJECTS:											
Forest	Houses	Garages, Sheds, etc.	Fences	Fields (breaking in acres)	Water Supply Systems	Barns and Stables (miles)	Telephones (miles)	Corrals	Bridges	Grounds	Trails (Miles)
Cypress Hills	1	1	1	1	1	1	1	1	1	2	1
Crownest	8	2	1	1	1	1	1	1	1	2	1
Bow River	6	2	1	1	1	1	1	1	1	1	1
Clearwater	3	1	3	1	1	1	1	1	1	1	1
Brazau	3	3	1	1	1	1	1	1	1	1	1
Athabaska	3	5	1	1	1	1	1	1	1	1	1
TOTALS	25	11	5	5	5	5	5	5	5	13 1/4	5

MAINTENANCE PROJECTS:											
Forest	Houses	Cabins	Barns and Stables	Telephones (Miles)	Trails (Miles)	Roads (Miles)	Fences	Corrals	Water Supply Systems	Garages, Sheds, etc.	Look-out Towers and Cabins
Cypress Hills	1	6	1	20	1	40	2	3	3	1	2
Crownest	8	13	4	161 1/2	238 1/4	103 1/4	18	2	2	6	9
Bow River	6	15	9	241 1/2	607 1/2	58 1/2	15	2	7	7	16
Clearwater	3	15	5	220 1/4	646 1/4	11	9	2	1	5	9
Brazau	4	6	3	212 1/2	271 1/2	13	9	2	1	8	2
Athabaska	3	14	3	79	426 1/2	89 1/2	12	1	2	8	4
TOTALS	25	59	25	934 3/4	2193 1/2	304 1/4	67	15	16	36	37

NEW CONSTRUCTION PROJECTS: IMPROVEMENTS—STATEMENT OF MAN-DAYS WORKED

Forest	Houses	Garages, Sheds, etc.	Fences	Look-out Towers	Water Supply System	Barns and Stables	Telephones	Corrals	Bridges	Grounds	Trails	Cabins	Tourist Soves	Fireguard Roads	Radio Portables	Miscellaneous
Cypress Hills	1 1/2	1 1/2	...	...	...	...	...	...	163 1/2	45 1/2	...	3	...	14	...	...
Crownest	7	21 1/2	9	...	...	...	...	...	...	13 1/2	7 1/2	82	...	...	...	4 1/2
Bow River	...	17	7	...	...	13	...	...	...	...	6	61	...	...	...	45 1/2
Clearwater	...	95 1/2	16	...	...	8	14	...	...	...	...	20	...	...	...	...
Brazeau	...	112	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Athabaska	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	8 1/2	247 1/2	32	...	...	21	14	...	163 1/2	59	13 1/2	166	...	14	...	54

MAINTENANCE PROJECTS:

Forest	Houses	Cabins	Barns and Stables	Telephones	Trails	Roads	Fences	Corrals	Water Supply Systems	Garages, Sheds, Etc.	Look-out Towers and Cabins	Grounds	Hay Meadows & Pastures	Ferries	Bridges	Miscellaneous
Cypress Hills	14	6 1/2	11 1/2	21 1/2	129	16 1/2	61 1/2	25 1/2	9	1/2	...	16 1/2	...	...	...	51
Crownest	159 1/2	5 1/2	13 1/2	311 1/2	504	98 1/2	229 1/2	10	8 1/2	51	...	84 1/2	65 1/2	...	41 1/2	24
Bow River	21 1/2	71	33 1/2	495 1/2	151	328 1/2	230 1/2	4 1/2	33	14	...	82 1/2	65	...	...	27
Clearwater	49 1/2	74 1/2	17	185	174	105 1/2	96 1/2	10 1/2	...	47	...	17 1/2	30 1/2	3	...	2
Brazeau	57 1/2	33	13	257	192	5	63	1	16	33	...	13 1/2	4	...	...	1
Athabaska	24	43 1/2	19	95	...	76	82 1/2	...	17 1/2	30	5	35	4	...	...	83 1/2
TOTALS	326	234	107 1/2	1365 1/2	1150	630	708 1/2	51 1/2	84	175 1/2	5	249 1/2	169	3	41 1/2	188 1/2

MILEAGE TRAVELLED BY EMPLOYEES OF THE ALBERTA FOREST SERVICE
FISCAL YEAR 1945-46

Divisions	Foot	Saddle	Driving	Speeder	Auto	Canoe	Rowboat	Motorboat	Plane	Railway	Others	Total
Northern Alberta Forest District	25,316	24,080	29,881	18,839	155,107	213	351	3,895	1,958	25,701	3,758	289,099
Crownest-Bow River Forest	3,084	28,632	3,671	.....	65,407	.....	.....	36	.....	377	75	101,282
Clearwater Forest	4,461	12,121	2,160	2,938	25,170	.....	.....	.....	.....	2,471	322	49,643
Brazzau-Athabaska Forest	8,059	11,264	1,884	5,566	26,175	.....	37	.....	.....	12,955	591	66,531
Cypress Hills Forest	90	2,116½	268	.....	13,791½	.....	.....	.....	.....	1,580	18	17,864
Radio	89	535	237	.....	11,481	.....	.....	.....	900	7,624	465	21,331
TOTALS	41,099	78,748½	38,101	27,343	297,131½	213	388	3,931	2,858	50,708	5,229	545,750

PUBLICITY

Contact was made and warnings given on numerous occasions by rangers to a great many travelling in the forests for their health and for recreation purposes. The usual warnings were given through the press and also by means of the radio stations in the Province during the periods of high fire hazard.

The management of the Canadian Forest and Outdoors Magazine assisted with publicity through articles in their magazines and by after-dinner speeches as well as by broadcasts over the Canadian Broadcasting Corporation hook-up.

NURSERY AND TREE DISTRIBUTION

Progress continues in our tree nursery technique at Oliver, where different exotic tree seed is being tried out so that when funds and labour are available we will be able to plant trees that will definitely improve our forests with superior species that are known to be hardy and should produce better and more valuable forest products.

We regret to report the discontinuance of the tree nursery at the Lethbridge Gaol. The reason for the abandonment of this project was the unforeseen effect of the water used for irrigation on the soil, i.e., the bringing of alkali to the surface, which is very detrimental to tree growth.

In view of the great difference in climatic conditions between the southern part of the Province and the district around Oliver, it would appear essential that a new site for a tree nursery should be secured in the southern part so that studies could be made of nursery products in the south as well. This site should be on land free from alkali and where water under pressure is available so that an overhead sprinkling system could be installed, as such a system has been found to be far more satisfactory than by ditch irrigation.

Tree Distribution:

The following species and quantities were given out from Oliver in the spring of 1945:

<i>Transplants:</i>		
White Spruce (<i>Picea glauca</i>)	15,638	
Colorado Blue Spruce (<i>Picea pungens</i>)	970	
Norway Spruce (<i>Picea excelsa</i>)	412	
Lodgepole Pine (<i>Pinus murrayana</i>)	5,680	
Red Pine (<i>Pinus resinosa</i>)	171	
Yellow Pine (<i>Pinus ponderosa</i>)	315	
Scotch Pine (<i>Pinus sylvestris</i>)	3,852	
Contorta Pine (<i>Pinus contorta</i>)	555	
Green Ash (<i>Fraxinus pennsylvanica</i>)	5,112	
Bur Oak (<i>Quercus macrocarpa</i>)	2,553	
Red Oak (<i>Quercus rubra</i>)	2,571	
American Elm (<i>Ulmus americana</i>)	1,351	
Douglas Fir (<i>Pseudotsuga mucronata</i>)	3,304	
Siberian Larch (<i>Larix sibirica</i>)	3,211	
European Larch (<i>Larix europaea</i>)	3	
	<hr/>	45,698
<i>Cuttings:</i>		
Laurel Leaf Willow (<i>Salix pentandra</i>)	11,700	
Golden Willow (<i>Salix vitellina</i>)	7,750	
North-west Poplar (<i>Populus</i>)	16,030	
	<hr/>	35,480
<i>Ornamental Species:</i>		
Lilac (<i>Syringa japonica</i>)	52	
Honeysuckle (<i>Lonicera ciliosa</i>)	44	
Cedar (<i>Thuja occidentalis</i>)	14	
Mountain Ash (<i>Pyrus americana</i>)	11	
Red Elderberry	8	
Black Walnut (<i>Juglans nigra</i>)	7	
Silver Maple (<i>Acer saccharinum</i>)	10	
	<hr/>	146
		<hr/>
		81,324

RADIO BRANCH

Report of Radio Superintendent, A. E. Earnshaw

In submitting a report for the fiscal year ending March, 1946, I would first like to mention that an even greater increase in the efficiency of operation of the detection and communication system was noticed. This increased efficiency can only be due to the fact that Lookout personnel were retained from the previous season and returned to their former locations at the start of the new season. Any new men hired were given sufficient instruction prior to their being placed on tower operations to enable them to start their work fairly well, and their progress under the supervision of the older members of the staff was good in most cases. All towers were placed in operation as usual during the latter part of April and first of May, and in an attempt to forestall equipment failures during the fire season all tower and headquarter stations' equipment was thoroughly overhauled at the start of the season. As the only equipment trouble occurring during the fire season was at points where a new staff had been placed, this method of overhaul would appear to be satisfactory. As a further safety measure, small two-tube transmitters capable of operating from dry batteries have been supplied to all towers for emergency use. By this means the towers can maintain contact in the event of engine failure, and quite often repairs can be made by the "Remote-control" method after a discussion of the symptoms of the trouble. New equipment was installed at the Coliseum lookout situated on the N.W. $\frac{1}{4}$ of 10-41-15, W. 5th Meridian, in order to provide a link between the radio and telephone systems in the Clearwater Forest Reserve. This equipment consisted of a modified car receiver and transmitter powered by 6-volt batteries, which in turn are charged by a wind-charger. It will be noted that this wind-charger is the only one in use in the communication system, as at other locations it has been found that sufficient wind is not available to maintain batteries at full charge.

During a heavy storm in November, 1945, all three radio masts at the Slave Lake Headquarters Radio Station were blown down. The antennae were temporarily jury-rigged and new masts were installed immediately. There was no cessation of radio operations during this installation.

Further experimental work was carried out, using frequency modulation in the 30 to 40 megacycle band. It had been decided previously that amplitude modulation in this band was inadequate, but it is hoped that the use of frequency modulation on the same frequencies will permit for greater coverage. Sufficient data will be gathered experimentally to cover all types of terrain found in the Province before a definite change is made in the present operation frequencies. In attempting to develop suitable equipment for operations in the 30 to 40 megacycle band, this Branch is considerably hampered by the lack of first-hand information regarding present developments in commercial equipment. Situated so far from manufacturers and design engineers, it is difficult to keep abreast of developments and changes in equipment as they appear.

Operating summaries as given below are comparable to the previous two years' reports, with the exception that the figure "hours of engine operation" shows a decrease and the amount of traffic handled shows a slight increase. This would indicate that more economical operation is obtained as the staff becomes more fully versed in its duties.

LOOKOUT STATIONS—60 Watt and 100 Watt

Station	Engine Time	Gas, gals	Oil, qts.	Messages	Words
Adams Creek	75'45''	18.75	4	145	2,144
*Athabasca	290'00''	23.00	11.50	213	4,191
Brazeau	256'04''	63.25	10.50	635	10,062
Buck Mountain	178'24''	36.50	3.50	553	10,608
Carrot Creek	192'18''	47.00	3.91	2,538	48,255
Goose Mountain	175'14''	60.00	2.75	488	6,611
Lovett	197'37''	50.00	3.25	701	10,390
Mayberne	337'40''	69.00	6.12	609	8,883
†Sask. Mountain	283'09''	42.50	2.68	460	5,743
Whitcourt	266'21''	54.00	3.87	853	17,180
Puskwaskau	274'42''	43.00	2.92	695	9,839
Total	2527'14''	507.00	35.00	7,890	133,876

*30 Watt Station.

†10 Watt Station.

HEADQUARTERS STATIONS

Station	Gas, gals	Oil, qts.	Messages	Words
Calgary			3,017	70,844
Edmonton			12,194	296,772
Edson			2,402	50,831
Grande Prairie			2,559	54,213
Lac La Biche	823'40''	180	2,437	57,523
Peace River			2,192	64,147
Rocky Mountain House			1,022	21,230
Slave Lake	1227'10''	322	1,152	28,768
Total	2050'50''	502	45½	644,328
Grand Total	4578'04''	1,009	100½	778,204

Distributed maintenance mentioned in previous reports is still in effect, but owing to the increased age of the equipment to be maintained the amount of maintenance necessary has increased slightly. Indication of this increase is given by the number of miles travelled by radio maintenance personnel in 1945 and 1946: Saddle horse, 535 miles; car, 11,481 miles; train, 7,624 miles; bus, 465 miles; foot, 89 miles; wagon, 237 miles; aeroplane, 900 miles.

What might have been a major catastrophe was averted by the quick action of one of the Edmonton Radio Station staff, who discovered a fire in its incipient stage in the basement of the Radio Station, and secured the services of the fire department in time to prevent serious damage to the building or equipment.

The work of consolidating and attempting to forecast fire hazard is being continued, and the data obtained by the method inaugurated by this Branch is being compared with the data obtained by other methods such as those in use in the Dominion service. Complete consolidations are made from time to time to determine which method would appear to be most accurate and satisfactory for the various parts of the Province.

Osborne fire finders are now standard equipment at all lookout towers, and their use has made fire locating considerably more accurate than before. This accuracy is of course dependent on that of the map in use, and it is regrettable that really good detailed maps of the entire Province are still unavailable.

In conclusion, it should be mentioned that this Branch has done considerable pioneering in the field of aerial deliveries of supplies to fire crews. Rations have been made up in five-man two-day packages. Methods of packing have been evolved and tested. Tools have been made up in five-man units and test drops have been made using various types of parachutes. Dropping techniques have been evolved to ensure safe deliveries of almost any type of fire fighting equipment.

NORTHERN ALBERTA FOREST DISTRICT

Report of Chief Timber Inspector, F. W. Neilson

FIRE SEASON

Snowfall during the winter of 1944-45 was normal and remained as a cover from November until spring. The latter part of March was extremely mild, and with the exception of wooded areas most of the snow disappeared during the March thaw. As there was little or no frost in the ground no run-off took place, the moisture being absorbed.

During the month of April the weather was rather cold and backward. Snow in the woods which had not disappeared during the March thaw remained well on into the month. High winds prevailed during the latter part of April and much of May, and precipitation consisted only of a few widely scattered showers. Low temperatures during the early part of May, however, retarded the fire hazard to some extent during that period.

During the latter part of May the hazard rose sharply and continued high almost to the middle of June. Showers which fell at this time and during the latter part of the month brought the hazard almost to normal.

In July the hazard again rose sharply over the whole district. In the Slave Lake, Grande Prairie and Peace River Divisions and particularly the two latter, the hazard remained high during the autumn months. Showers during late summer and autumn brought the hazard to normal over most of the other divisions. Snow which fell in the latter part of October ended the hazard for the season over the whole district.

FIRE PREVENTION AND SUPPRESSION

A larger number of fires than usual were caused by lightning, and several of these were in locations most difficult of access. Our heaviest loss from any one fire, and one which constituted 24% of the total loss within the N.A.F.D., was the Simonette fire. This was caused by lightning. It occurred in July during a period of very high hazard, and unfortunately ravaged a heavy stand of merchantable spruce timber before anything could be done. It was spotted and reported by the tower, but by the time a fire crew could be gathered and moved on foot about sixty miles over old Indian trails, the damage had been done. A road over which men and equipment could be moved rapidly might have made a vast difference.

In the spring and fall, however, the majority of our fires are caused either directly or indirectly by settlers. This applies more particularly to the west side of the Slave Lake Division and the Grande Prairie and Peace River Divisions. Quite a number of the fires classified "Unknown" or "Incendiary" are undoubtedly caused indirectly as a result of settlers' land clearing operations.

In a good many cases fires are set some distance from the land to be cleared; usually at a point where there is no person living. The purpose is, of course, to avoid responsibility. With a favourable wind and conditions right, there is usually little doubt that the fire will sweep over where it is wanted. This in turn leads to backfiring by other settlers for self-protection. There is also a natural urge on the part of the new settlers who have clearing to do to burn when conditions are right, and the greater proportion of lands which have been cleared in Central and Northern Alberta have been cleared by this method. Old ground fires, too, which have been smouldering in peat lands, flare up when the hazard is high and when the grass is dry, start running. When such conditions occur the fire ranger could not begin to keep up with all these fires, even if he had more legs than a centipede.

Last year the need for roads and trails to help guard the great forested interior which contains most of our present and potential merchantable timber, was outlined. In this report I wish to draw attention to a different problem; one which to some extent faces us in every division of the N.A.F.D., but more particularly in what is known as the Peace River Country.

Mention could be made of a number of areas, but two will suffice to outline the problem:

1. The area between Tangent and Wanham on the Northern Alberta Railway bounded on the east by the Big Smoky River, on the north by the Peace River and on the south by the Smoky River and the Birch Hills. Settlement is sparse and very scattered. During the past three years there is hardly a foot of this land that has not been touched by fire. Fortunately, most of the merchantable timber has been salvaged and equally fortunately most of the area is potential farm land. However, in the ruthless burning that has taken place the Birch Hills, a watershed and suited for agriculture, have been burned over and the cover on the broken lands and coulees along the Peace and Smoky Rivers has also been killed. In this area all that now can be hoped for is that when settlers' broadcast burning is over, nature will re-clothe the hills and marginal lands with another cover.

2. The area north of the Peace, which roughly is bounded on the north by a line commencing on the south-east corner of Township 85, Range 1, west of the 6th Meridian, and running to the north-east corner of Township 37, Range 7, west of the 6th Meridian, thence due west to the British Columbia boundary. Between the Peace River and this imaginary line there already exists the settlements of Clear Prairie, Worsley, Eureka River and Hines Creek. North of it lies the Clear Hills, a watershed.

In the folds of the Clear Hills are many excellent stands of white spruce and lodgepole pine. The remaining portions of the hills are generally covered with a good growth of poplar. Already guts of old fire extend from the settlements into the hills. The burning has not yet reached the ruthless stage mentioned in area No. 1 and the greater part of the timber is still intact, but a few more dry years accompanied by indiscriminate burning will certainly show a similar picture unless we do something about it.

The Peace River Country from an agricultural viewpoint is Canada's last Great West. As most of this great undeveloped area of potential farm land lies within the Province of Alberta, the gain that will come from its development will be primarily Alberta's gain. It is, however, a semi-arid country, and the problems that can arise and the loss that may occur because of the ruthless destruction of tree growth on watersheds and marginal lands will also be Alberta's problems and loss.

In areas such as the second one described most of the merchantable timber and other cover on the hills is intact. This area lends itself to a system of bulldozed fire guards between settlement and the hills. Every good farmer knows that if he is to continue as a successful farmer he must use most of the surplus obtained in years of plenty to build for the future and repair the errors and losses of the past. It seems to me we are just in that position today. We have a surplus and we need to build for the future and repair the errors and losses of the past.

During the past season our losses in the face of none too favourable conditions were greatly reduced from those incurred in the previous year. This may be attributed to a number of reasons. There is an ever-growing sense of responsibility on the part of the ranger staff; a greater alertness and a better understanding of action to be taken. The great contributing factor, however, is that, because it is becoming more and more available, we were able to hire heavy

equipment such as bulldozers for fire fighting purposes. With the increasing reluctance of settlers to fight fire at the rate of 15c per hour, we would indeed have been in a sorry plight during the past season had it not been for the use of power equipment.

PERSONNEL

Two of the Timber Inspectors resigned during the year to take up business for themselves. Each started in the Forest Service as a ranger, and after a number of years of service each was moved up to take charge of a district. We can ill afford to lose the services of trained men.

As in the previous year a number of ranger positions were still unfilled at the end of the season, but it is expected these will shortly be filled by returned service men. We welcome back to our ranks Mr. F. V. Keats who, prior to joining the R.C.A.F., was a ranger in the Slave Lake Division. Mr. Keats has now taken over the duties of Inspector in the Lac La Biche Division.

New ranger appointments were made for District 38, Lac La Biche Division; Railway Patrol, Lac La Biche Division; District 31, Slave Lake Division; and District 18, Slave Lake Division.

Mention was made in last year's report of the many and onerous duties of the Timber Inspectors. These duties have in no way decreased; rather timber operations and volume of material produced have increased. The need for a number of assistant inspectors becomes ever greater, and I must point out that it is impossible for the present inspection staff to adequately carry out the amount of work that should be done.

A ranger conference was again held this year, but we were able to obtain accommodation in Edmonton instead of Westlock as in former years. It was found again to be a valuable meeting ground of opinion. One of the most important subjects discussed, in addition to different phases of the Timber Regulations, The Forest and Prairie Fire Act and The Game Act, was the use of power equipment in fire fighting. A number of rangers have had considerable experience in the use of bulldozers and other power equipment, and the discussion on how to use such equipment, where to use it and when to use it was of great value to men with less and in some cases no experience in the matter.

NEW CONSTRUCTION, IMPROVEMENTS AND MAINTENANCE

With a staff already overworked in the attempt to keep up in the cruising and estimating of timber in connection with the great volume of applications for berths, together with fire fighting and duties connected with trap lines and game, new construction and improvements by the inspection and ranger staff were in most cases made during time literally snatched from other duties. Only very limited funds were available for the hiring of outside labour. In the new construction, improvements and maintenance listed hereunder, unless specifically stated to the contrary, the work was done by forestry staff.

Improvements:

Breton Division—Cache and ranger cabin at Alder Flats painted. 1,000 ft. B.M. 2 x 6 and 1 x 6 lumber purchased and laid down at Alder Flats cabin for further improvements. A cache of fire fighting equipment for a 12-man crew established at Breton in a building owned by the Fraser Lumber Company. All fire fighting equipment overhauled and repaired.

Edson-Carrot Creek Division—Fence posts cut and peeled for the pasture at the proposed Drayton Valley cache location. Cold Creek cabin completed. This is a standard forestry cabin built of peeled lodgepole pine logs with dove-tailed corners and is a credit both to the builders and the forest service. Barn partly constructed at the Athabaska cabin site on the old Grande Prairie trail. Trail

located and partially cut out between Sundance Lake and the Athabaska cabin. Mile 21 bridge on the Grande Prairie trail repaired. Alder cleared out of the Grande Prairie trail between Mile 29 and Mile 96; several culverts put in and re-grading done at the crossing of a small creek on the same trail. Forestry boat at the Berland River repaired and repainted.

Slave Lake Division—A total of 533 man-days were spent by ranger and lookout staff on new construction; maintenance of existing improvements and maintenance of equipment. In addition, there were 69½ man-days by hired labour in new construction and trail maintenance. Goose River cabin, Sec. 25-66-16, W. 5th Meridian; logs cut and peeled and walls erected. East Prairie cabin, sec. 3-68-14, W. 5th Meridian; logs cut, decked and partly peeled and first round of logs in place. Carrot Creek cabin, sec. 15-68-18, W. 5th Meridian, at mile 22, Freeman Extension trail; log walls built 12 x 14, and completed with roof, windows, etc. West Prairie cabin; doors and windows put in and interior completed. Goose Mountain tower; logs peeled and four rounds put up for a barn. Swan ranger house; logs cut and hauled last year, peeled and ready for erection. Wabasca; new cache constructed. New sleigh trail blazed between mile 9 and mile 23 on the East Prairie trail. Cut-off trail, cut from mile 24 East Prairie trail to Goose Mountain. Seventeen new pack bridges, three new wagon bridges and 630 feet corduroy constructed on the Swan, Goose, East Prairie and West Prairie trails. New aerial masts erected at the Slave Lake headquarters.

Calling Lake Division—New barn 10 x 15 constructed from salvaged lumber with slab roof and feed shed, slab construction, built at the Lac La Biche River cabin. Four miles wagon trail from sec. 31 to sec. 35-74-16, W. 4th Meridian cut. Pelican Mountain trail of approximately 15 miles cut out in Townships 75 and 76, Range 23, W. 4th Meridian. Trails maintained: Calling Lake to Touchwood Lake, 25 miles; Calling River Trail, 20 miles; West Calling Lake Trail, 15 miles; Fish Camp Trail, 8 miles.

Westlock Division—New log ranger cabin 14 x 16 completed at Fort Assiniboine. Radio aerial pole 48 feet high erected at Fort Assiniboine. The Fort Assiniboine cache windows and shutters refitted and painted. The Freeman River Trail cleared of windfalls from sec. 6-64-7, W. 5th Mer., to sec. 15-64-8, W. 5th Mer., a distance of about four miles. Two bridges along the same trail recapped.

Peace River Division—Four leg lookout ladder or tower 40 feet high erected on N.W. ¼ of sec. 15-81-20, W. 5th Mer.

Grande Prairie Division—Log cabin with roof of split poles and roofing paper and split log floor erected along Cutbank River unsurveyed. Logs cut for cabin to be erected on approximately sec. 23-67-7, W. 5th Mer., unsurveyed. Existing trails used by rangers, maintained.

Lac La Biche Division—Timber cut and hewn for tower legs for proposed tower on Sec. 29-65-9, W. 4th Mer. Frame building 8 x 10 erected at Lac La Biche headquarters for a gasoline cache. Axe and shovel racks erected and new work bench built at Lac La Biche headquarters. Tower road again cleared of windfall and reopened.

LOOKOUT TOWERS

Although greater coverage by towers would be most welcome, it was impossible to do any new construction this year. The same towers mentioned last year were in operation and gave satisfactory service.

Four of the towers in the Lesser Slave Lake Division are connected with telephone communication. The clearing of fallen trees and repairs necessary to

keep these lines open, involves a great deal of work every year; 126 man-days being spent during the season in their maintenance. This could be eliminated by substituting radios instead of the present system, and as the towers are all within a reasonable distance of headquarters at Slave Lake, the ordinary ranger sets would be satisfactory. Such being true, it would be unnecessary in these cases to insist on a lookout man trained to send and receive by key; rather reliance should continue to be placed on men for these positions with a knowledge of the country.

CROWSNEST-BOW RIVER FOREST RESERVE

Report of Forest Superintendent, J. P. Alexander

FOREST PROTECTION

The staff of the reserve was maintained at its authorized strength throughout the year.

(a) *Fire Season:*

Following a mild winter (1944-45), the spring was protracted and cold with considerable precipitation. New growth was late but developed well from May onwards, and sufficient rainfall occurred during the summer months to maintain growth.

Late summer and early fall were comparatively dry without, however, developing any undue fire hazard, except in the southern drier portions of the reserve, where a short hazardous period in late July and August resulted in two larger fires.

Heavy snowfalls in October finally overcame all fire danger.

(b) *Fire Prevention:*

While the general public utilizing the reserve have, on the whole, continued to give very good co-operation in fire prevention, the fact that seven out of our twelve fires are known to have originated by human agencies is evidence that more publicity or education of the public would not be amiss.

The direct contact of our field staff with users of the reserve is undoubtedly the most effective method of education. It should, however, be assisted by other means, and in this regard it is recommended that more fire posters could well be adopted. These, I think, should be of attractive designs and show a minimum of lettering other than the main slogan or fire message.

(c) *Fire Detection:*

Detection methods have remained the same as in former recent years, i.e., by lookouts and field staff patrol.

The adoption of radio has added a useful means of emergency communication for such stations as are now equipped, and any extension of this system would be of value.

(d) *Fire Suppression:*

A total of 12 fires occurred during the season, only two of them involving expenditures other than ranger labour.

The total cost of suppressing all fires was \$1,368.16, composed of \$1,158.11 for actual expenditure and \$210.05 for ranger labour.

Nineteen burning permits were issued.

Personnel:

A number of internal transfers were effected and one Assistant Ranger promoted to District Ranger.

Fire Fighting Equipment:

The supply of fire fighting equipment has remained stationary during the war years and, while it has been sufficient for our needs, there is some need of replacements and also room for increases in some cases when the equipment becomes available.

Forest Administration:

Under this heading are considered timber disposal, grazing permits, grazing and miscellaneous uses, such as surface rights, trappers' cabins, roads, etc.

Timber.—The demand for timber, particularly lumber and mine timbers, remained great and even increased. Thirty-one timber sales were in effect, three of which were not operating. The revenue from these sales was \$23,852.47 for the underlisted products:

Saw logs	7,354,159 F.B.M.
Mine Props	1,645,640 lineal feet under 9"
Mine Props	43,422 lineal feet over 9"
Lagging	366,428 lineal feet
Piling	2,675 lineal feet
Fence rails	36 pieces
Fuelwood	600 cords

During the year 140 permits were issued for a total revenue of \$2,820.17 for material as hereunder:

Sawlogs, green	117,000 F.B.M.
Sawlogs, dry	25,000 F.B.M.
Mine Props, under 9"	464,766 lineal feet
Mine Props, over 9"	160 lineal feet
Lagging	55,000 lineal feet
Fence rails	10,591 pieces
Fence posts	2,300 pieces
Fuelwood, dry	678 cords
Building logs, under 9"	4,974 lineal feet
Building logs, over 9"	5,559 lineal feet
Telephone poles	42,500 lineal feet
Fence droppers	1,200 pieces
Corral rails	300 pieces
Roof poles	198 pieces

Hay.—Two hay permits were issued during the year for a revenue of \$7.00.

Grazing.—Grazing conditions during the season were particularly favourable in all districts. Although the spring was delayed and forage growth later than usual, subsequent favourable weather yielded an excellent forage crop, and stock was in first-class condition at the end of the season.

The demand for range, more particularly in the middle divisions of the reserves, far exceeded the allotments, and many applicants were unavoidably reduced in number or altogether refused. With the existing good stock prices, this condition is expected to continue.

For the year, 288 grazing approvals were issued for 22,294 cattle and horses and 4,800 sheep. Revenue for the year was \$20,166.58.

Losses of stock on the whole were not heavy, and about the natural average with the exception of the North Sheep and Castle River Divisions, where heavier losses occurred. While the losses in these cases were attributed largely to bears, no satisfactory evidence was given in support of this contention, and it is felt that rustling played some part in the losses.

Uses.—One hundred and twenty-nine grazing and miscellaneous use permits were issued for a revenue of \$903.97.

Improvements:

The favourable summer season allowed almost continuous improvement work throughout the year, and results compared very favourably with past years.

Improvements—New Construction:

Eleven new construction projects were initiated during the year. Eight of these were completed—Coleman R.S. House, Lynx Creek Cabin, East Porcupine R.S. Garage, Kananaskis Boat House, Elbow and Kananaskis Camp Grounds, Aura Radio and Castlemount District Gateway. Uncompleted were Elbow R.S. House and Garage and the Livingstone Forks Bridge. There were 251 man-days devoted to these projects at a cost in wages of \$1,194.42 and an outside expenditure of \$807.69.



Assistant Ranger's cabin, Rocky Mountain
Forest Reserve

Improvements—Maintenance:

Existing improvements were, on the whole, maintained in a satisfactory condition, and all maintenance work was completed by reserve labour, no outside help having been engaged. There were 3,164½ man-days devoted to maintenance work at a cost in wages of \$14,740.98.

Timber Sales	\$23,852.47
Timber Permits	2,820.17
Grazing Permits	20,166.58
Hay Permits	7.00
Maps	23.25
Fishing	413.50
Game	418.00
Grazing Uses	440.28
Miscellaneous Uses	463.69
Suspense	135.35
	<hr/>
	\$48,740.29

The mileage travelled by the entire staff in the course of their duties was:

By automobile	118,502 miles
Saddle horse	37,012 "
By team	2,418 "
By train	717 "
By bus	715 "
On foot	4,801 "
	<hr/>
	164,228 miles

CLEARWATER FOREST RESERVE

Report of Forest Superintendent, J. R. H. Hall

Weather:

Snowfall during the winter months was heavier than usual, and there was an average of twenty inches of snow on the ground. This snow crusted early in the winter and remained in this condition until late March. Most of this snow fell during November and December, 1945, although there were several bad storms in January and February, 1946. The weather station at Rocky Mountain House recorded a fall of 26.5 inches of snow in December.

Snow disappeared from the forest floor early in April, but the weather remained cold in the mountains. There was light snow at intervals during April.

The spring rains came early in May, and rainy weather continued with only a few weeks of dry weather during the entire season.

No period of high fire hazard arose. The fire season ended with six inches of snow near the end of October. Numerous snow storms during November brought the snowfall to away above normal, with eighteen inches of snow in the woods at the end of November.

Fire Detection and Suppression:

Very little time was spent by rangers on fire patrol or suppression. Lookout men spent considerable time away from their towers on improvement work.

Fire Fighting Equipment:

The usable equipment is in good condition, but there are still a number of worn-out articles to be replaced.

Forest Administration:

Conditions for brush burning were more favourable this winter, as there was a good covering of snow on the forest floor.

Timber business was about the same as last year. Following is a list of the transactions recorded during the fiscal year 1945-46: Timber Sales in operation, 20, dues collected \$18,188.58; Timber Permits issued 57, dues collected \$1,566.35.

During the year eight new timber sales were advertised and sold, and five sales were cancelled. The Guarantee Deposit is being held on Timber Sale 226 until brush disposal is satisfactory.

Timber operators did not have as much trouble securing help this year, but had to pay high wages.

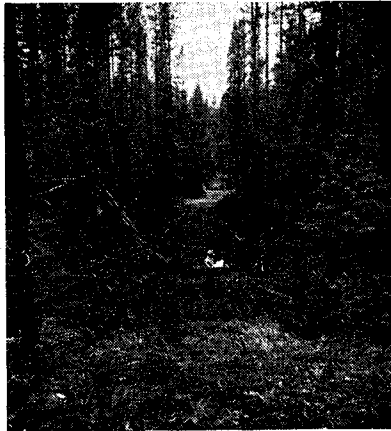
USES

Oil:

The following companies are still carrying on drilling operations on the Clearwater Forest:

- Shunda Oils, Nordegg, Alberta—Well No. 1.
- Shell-Home, Nordegg, Alberta—Well No. 2.
- Imperial Oil Co., Harlech, Alberta—Well No. 1.
- Ram River Oils, Prairie Creek—Well No. 3.
- Ram River Oils, Clearwater River—Well No. 4.
- Brazeau Oils, Nordegg, Alberta—Well No. 1.

Ram River Oil Company Well No. 2, which is located on Prairie Creek, in Township 37, Range 11, West 5th Meridian, is still producing a small quantity of oils and plans are being made to enlarge the hole.



Seismograph road through forested foothill country

Seismograph lines were run in the forest west of Sundre, across Timber Sale 290 and in the Walton Creek district. The lines started last winter in the Teepee Pole Creek and Prairie Creek areas were worked on and the former line was completed. A new line was started south of Caroline and is being completed this winter. This enters the forest on the south bank of the Clearwater River and follows the height of land almost to Limestone Creek. Brush and debris from these bulldozed lines has not all been properly disposed of, but crews have been working on lopping, piling and burning. Brush burning has been completed on the seismograph trails in the Home Oil area north of Nordegg, and good progress is being made on the Cole Creek-Nordegg River line.

Miscellaneous Use Permits:

Twelve new uses were authorized during the year and eleven completed.

Grazing:

There was no increase in grazing. Summer forage conditions were good in all districts.

At the end of November snow conditions on most of the forest range lands was not very good for grazing. In some areas a crust was formed in November, and added fresh snow made foraging conditions very bad for range horses.

The snow was deep and crusted during the winter of 1945-46, making foraging tough for stock. A large number of wild horses and some permitted horses perished.

The total number of stock grazed during the fiscal year is listed below:

Total number of stock grazed under permit	1,237
Total number of horses grazed under permit	692
Total number of cattle grazed under permit	545
Total number of sheep grazed under permit	94
Total number of permittees	13.16
Average number of stock per permit	

Collections by months are shown below:

April, 1945	\$ 13.60
May	697.17
June	196.01
July	10.80
August	60.40
September	32.97
October	52.92
November	105.55
December	109.01
January, 1946	27.28
February	97.95
March	145.00
Total	<u>\$1,548.66</u>

Improvements:

During the fiscal year, rangers spent 187½ days on new construction work and 784 days on maintenance work. Practically all trails were cleared of wind-falls and some bridges and culverts were re-built and repaired. Telephone lines were overhauled and put in good condition during the season. In October a fall of snow bent green saplings over the telephone lines and trails, and considerable work was necessary to get telephone lines in shape again. Some of the trails are still to be cleared of overhanging saplings which are bent across the trails and their tops held down by the snow.

The Big Horn Cabin was completed and the Idlewild Cabin just about completed. A cement foundation was put under the Shunda Warehouse, Shunda Barn, Shunda Bunkhouse and the Holbrook Cabin. The Red Deer House was re-plastered and storm windows and doors put on. The Red Deer road was re-graded and widened in places.

A garage and storage is required so that the equipment at headquarters can be properly maintained and stored.

Heavy rains again caused damage to trails, and only trail crews can repair and rebuild bridges, corduroy and grades, to bring the trails up to standard.

Thirteen new construction projects were worked on during the fiscal year:

Cabins	4
Stables	1
Storehouse	1
Trails	1
Radio Poles	2
Station Grounds	1
Fences	2
Forest Signs	1
Total	<u>13</u>

Personnel:

A small turnover of personnel—one assistant ranger resigned and a returned soldier was appointed as assistant ranger to fill the position vacated. The following positions were vacant during the winter months: Red Deer, District No. 1, Ram, and Brazeau West.

Game:

The rangers spent a great deal of their time on game patrol during the hunting season. There was a very heavy influx of hunters the first few days of the season, but heavy snow and cold weather drove a great many of them out of the woods. The majority of the hunters this season were in the Clearwater and Red Deer Districts.

For the purpose of beaver control and a wider distribution, one ranger trapped beaver in eight locations east of Rocky Mountain House and a hired trapper worked in the Sundre district. Eight of the live beaver trapped were shipped to Edmonton and the balance were released in Crimson Lake, Shunda Creek at Saunders and a small lake at Nordegg.

The deep snow last winter did not affect wild life very much, and big game animals came through the winter in fairly good shape.

Wolves are on the decrease, and in some districts are affected by mange, which is taking its toll.

Recreation:

A large number of people travelled on the forest for fishing and hunting purposes. The forest staff sold 126 season and 12 three-day fishing permits, 706 travelling permits. The free permits covering 1,569 persons were issued to 706 permittees.

Travel:

The following mileage was travelled by personnel of the Clearwater Forest during the fiscal year:

	Miles
Car	13,540
Truck	11,630
Railway Speeder	2,938
Railway Train	2,471
Saddle Horse	12,121
Team	2,160
Tractor	84
Foot	4,461
Bus	238
Total	49,643

BRAZEAU-ATHABASKA FOREST RESERVE

Report of Acting Forest Superintendent, D. Buck

Personnel:

Several new appointments, transfers and promotions were made during the year. Two veterans returned from war services and were re-employed. Two other veterans were taken on as new employees. Two rangers were promoted to Timber Inspectors.

The office staff, consisting of a clerk and assistant, changed during the year. The clerk was transferred to the Calgary Land Office. The assistant clerk resigned. The assistant's position remained vacant for a lengthy period, making necessary considerable overtime work.

Fires and Seasons:

After an exceptionally warm month of March, the weather turned cool and remained so throughout the spring and early summer. Although the average precipitation for the season was low, constant showers were received which prevented inflammable matter from becoming extremely dry, and when fires did occur prevented them from getting out of control before control measures could be taken.

The annual statement of fires for the year 1945 shows a total of 16 fires, of which six were Class "A" and ten were Class "B", with a total burnt over area of $11\frac{3}{4}$ acres.

Two Class "A" fires were extinguished during the month of January. These were small ground fires in both cases, at the side of roads. July, as usual, was the most dangerous month, when five fires were extinguished.

Action on one Class "C" fire outside of the Reserve was taken by Ranger Prowse, who was in a position to take the initial action on the Lewis Creek fire prior to the arrival of Ranger Hackett.

Fire detection methods remain the same as in previous years. One radio, two radio and telephone and two telephone equipped lookouts are in use during the fire season. In addition, the Forest Office at Edson is radio equipped, consequently is in touch with all rangers almost daily, and in the case of emergency can support them by sending in men, provisions and equipment to fire headquarters, while the ranger remains at the scene of the fire to organize control action.

The mileage and method of travel by the staff during the fiscal year is listed below:

	Miles
Auto	26,175
Saddle	11,264
Railway	12,955
Foot	8,059
Speeder	5,566
Team	1,884
Dog Team	524
Motor Cycle	67
Row Boat	37
Total	66,531

IMPROVEMENTS—BRAZEAU FOREST

New Construction:

Buildings.—Lovett Lookout cabin construction commenced to replace the original log building. This new cabin will be of lumber construction throughout, with office, bedroom and living room finished inside with Tentest. All material is on hand to complete this project next year.

Logs were cut for a log barn at Leyland Ranger Station, and a small garage was started at Coalspur to be constructed from salvage lumber.

The following buildings commenced the previous year were completed: Red Gap Cabin, Lovett Shop and Cache, Kaywood Cabin and Leyland Cache.

Telephones.—A spur line $3\frac{1}{2}$ miles in length was constructed from Mile 55 Big Horn grounded line to Grave Flats L.O., in order to break the circle which previously existed on the Brazeau Forestry telephone system.

Trails.—The Warden Creeek Tail originally cut by the Jasper Park Administration had fallen into disrepair and the phone line had become a menace to big game. This was cleaned out and the wire taken down.

Fences.—Twenty acres of pasture fenced in at Pembina Forks cabin.

Maintenance: The following statement shows days worked and ranger labour cost of maintenance on the various classes of projects on the Brazeau Forest:

Buildings	126½ days	\$ 556.50
Telephones	257 days	1,136.05
Roads and Trails	179 days	777.36
Fences	63	278.13
Miscellaneous	45	186.30
Total	670½ days	\$2,934.34

IMPROVEMENTS—ATHABASKA FOREST

New Construction:

Only minor building projects were undertaken during the year. The Canyon Creek Cabin was plastered outside completing this project. Entrance implement shed was constructed from salvage lumber. Construction of the Rock Lake Cache and Muskeg Cache commenced.

Trails.—Donald's Flats L.O. Trail was completed to a point where the ranger for the district can look over the eastern portion of his district. A proposed trail from Hay River Cabin to the Reserve boundary has been located to take the place of the present trail, which has been washed out in several places.

Fences.—A fence at Rock Lake to enclose 40 acres for pasture and a page wire fence around Moberly Creek Cabin were constructed.

Miscellaneous:

The following statement shows days worked and ranger cost of maintenance under the various classes of projects in the Athabaska Forest:

Buildings	120½ days	\$ 567.06
Telephones	95 days	455.89
Roads and Trails	267½ days	1,253.36
Fences	81½ days	393.77
Miscellaneous	143 days	688.91
Total	707½ days	\$3,358.99

Fence maintenance was heavy. This is due to the Entrance Pasture Fence, which has deteriorated to the extent that complete rebuilding is necessary. This pasture is over 200 acres in extent, but affords comparatively little grazing. A portion of this pasture might be broken and seeded to grass for pasture, and the fence reduced accordingly.

FOREST MANAGEMENT

The total revenue from all sources for the year amounts to \$98,228.95, an increase over the preceding year of \$38,774.88. A statement of collections under the different headings follows:

Total Timber Revenue collected	\$67,680.12
This is an increase of \$21,192.22 over 1944-45.	
SALES:	
Application Deposits	\$ 825.00
Guarantee Deposits	14,645.50
Dues and Fees	50,907.70
	66,378.20
PERMITS:	
Dues and Fees	\$ 1,071.12
Seizures	230.80
	1,301.92
	\$67,680.12

Statement of increase and decrease of timber revenue:

Total Revenue increase	\$21,192.22
REVENUE INCREASE:	
Guarantee Deposit	\$ 8,488.50
Sales (Dues and Fees)	13,558.80
	22,047.30
REVENUE DECREASE:	
Application Deposit	\$ 100.00
(Permits) Dues and Fees	430.13
Seizures	324.95
	855.08
Increased Revenue collected	\$21,192.22

The following is a statement of material manufactured from Timber Sales within the Brazeau-Athabaska Forest during the fiscal year ending March 31st, 1946:

Number of active Timber Sales	34
Lumber, F.B.M.	14,932,356
Railway Ties, pieces	335,790
Tramway Ties, 5 ft. lineal ft.	48,683
Switch Ties, lineal ft.	2,518
Mine Timbers (green and dry), lineal ft.	506,495
Building Logs, lineal ft.	5,798
Slabs, cords	982½
Power Poles, lineal ft.	6,735
Piling, lineal ft.	1,240

The following products were cut under permits issued: One seizure: 500 ties and 20,000 FBM lumber.

32 Timber Sale cutting permits:	
4 Permits building logs, LF	5,394
1 Permit (fringe) lumber, F.B.M.	75,000
1 Permit (fringe) ties, pieces	4,000
1 Permit piling, LF	1,080
2 Permits railway ties, pieces	1,355
2 Permits fence rails and posts, pieces	359
4 Permits mining timber, green, LF	2,199
dry, LF	251,785
5 Permits fuelwood, green and dry, cords	24

The total forest products manufactured from the forest for the year ending March 31st, 1946, are as follows:

Lumber, F.B.M.	15,027,356
Railway track ties, pieces	341,645
Tramway ties, LF—5'	48,683
Railway switch ties, LF	2,518
Mine timbers (green and dry), lineal ft.	760,479
Building logs, lineal ft.	5,798
Slabs (lagging), cords	982½
Fuelwood (green and dry), cards	24
Fence rails and posts, pieces	359
Piling, lineal ft.	2,320
Power poles, lineal ft.	6,735

All operations in spruce timber are being conducted in mature stands. In this circumstance a clean cut is encouraged. The pine timber is not uniformly mature, and the cutting of trees under 11" stump diameter creates considerable waste for, although a top log is taken after the tie logs have been made, there is still a long top left as the tree, being immature, has not filled out although the height is there.

Miscellaneous Uses—Permits:

A total of 116 General Permits was issued during the year for the following projects:

Oil Well Sites	2	Power Lines	6
Trapper's Cabins	43	Mill-site	3
Telephones	2	Storage Yards	3
Hunting Lodges	2	Dam site	3
Fisherman's Cabins	1	School	1
Boathouses	1	Gas Storage Tank	1
Roads	21	Dump Ground	2
Stockman's Cabins	2	Cultivation	1
Fenced Pasture	2		
Prospector's Cabins	2		
Surface Rights	19	Total	116

A total of \$919.04 has been collected under this heading:

Several major projects have been commenced during the year. To mention some:

The Sterling Collieries have obtained Under Rights in Twp. 46, Rge. 19, W. 5th Meridian, and if the prospects turn out as expected, in all probability the railway tracks will be replaced as far as Lovett.

The Luscar Coals have been issued Surface Rights covering 6.04 acres for the purpose of strip mining. This is the third such project on the branch railway and probably will develop into the largest. Both the Cadomin Coals and Luscar Coals have strip mines now from which over 1,000 tons of coal per day are produced.

The Imperial Oil and McColl Frontenac bulldozed over 150 miles of winter seismograph roads, the latter named company being the operating party for four other major oil companies. It is expected that in the near future an all weather road to the Muskeg River area, an approximate distance of 75 miles, will certainly open up the Athabaska Forest.

The Brule Lumber Company have constructed a road from Brule to Timber Sale No. 372, on the Hay River, approximately 7 miles from Rock Lake.

Trapping:

Excellent catches with good prices, especially for smaller fur such as squirrels, weasel and martin, were reported.

A total of 73 trapping licenses were issued for 62 areas within the forest and the additional area north of the Athabaska Forest.

Special beaver permits were issued to applicants holding registered trapping licenses permitting a maximum catch of 10 beaver, but this maximum was only allowed to not more than six trappers upon recommendation of the ranger concerned.

CYPRESS HILLS FOREST RESERVE

Report of Ranger-in-Charge, J. D. Champion

FOREST PROTECTION

Fire Season:

As in 1944, the past season was very dry, and I am pleased to report no serious trouble from fire. A fire that could well have been disastrous, started by a careless smoker in a logging area, was noticed by the assistant ranger and was put out before doing any damage to Crown property.

Detection and Suppression:

As in previous years, the ranchers and farmers living near the reserve and who are connected by telephone to Reserve Headquarters, assist on fire detection. The settlers from the Thelma and Eagle Butte districts are now connected by telephone and can be switched onto Reserve Headquarters, so that telephone connection exists with the west as well as the east end of the reserve.

Fire Fighting Equipment:

The equipment is in good condition. In store is one Johnson pump and enough tools to equip a fair size crew. The pump is in good working order, having been tested several times during the summer. A need exists for a tractor and bulldozer to build more fire guard roads; this is one job that should be attended to, as it will be too late after a fire.

FOREST ADMINISTRATION

Although this is a small reserve, it is necessary to spend a great deal of time on supervision as it is completely surrounded by settlers and is accessible at all points. During the summer and fall months a complete patrol of the reserve should be made at least every other day and, at times, every day. Owing to lack of help and necessity of keeping up with other work, proper coverage is not possible.

Game:

Again it is requested that this reserve be turned into a game management area. If this were done it is believed that the fur and game could be dealt with more efficiently and profitably. There are white tail and mule deer in fairly large numbers, also an abundance of beaver, coyote are plentiful, and there are some lynx, lynx-cat, mink and muskrat. It is hoped that by the end of September squirrels will be established in the Cypress Hills. Fairly large numbers of deer have been seen by the writer twenty miles to the south of the reserve, and have been reported between here and the Sweet Grass.

Timber:

The timber business has been continued as in the past, all timber is taken out under permit and all conifers are marked by the forest staff before being cut.

Silvics:

The lodgepole pine seed crop was very light, and there were no white spruce cones. We have several patches of pine infested with mistletoe that should be taken out. The mature spruce shows some butt rot and is being taken out for saw logs. Timber operators are improving their brush disposal, winter burning is encouraged, the forest staff spending considerable time on this project.

USES

Grazing:

Owing to the fact that spring moisture was plentiful, the forage has improved to the point where it is possible to raise the grazing quota. A large number of

stock are grazed for the size of the reserve, over 3,000 head of horses and cattle. Cattle permits for five months and horse permits for seven months only are issued; no winter grazing has been allowed on this reserve for several years. It is thought that some improvements in grazing conditions and the handling of stock could be made. The bench land is covered with small brush, and it is felt that if some of this brush were cut the grass would be improved and grazing generally. Owing to feed shortages throughout the ranching area, a number of stock owners had to cut down their herds, and some new permittees will be taken in during 1946.

Watering and Feeding Grounds:

A number of ranchers and farmers living adjacent to the reserve rent feeding and watering rights on the reserve; these rights are rented under a yearly permit.

Pastures:

As with the feeding and watering grounds, isolated areas for pastures are rented to those living close to the reserve. These rights are also held under a yearly permit.

Improvements:

Fire guard roads throughout the reserve were maintained and four miles of new fire guard road was constructed down Battle Creek from the northern boundary of the reserve in Section 29, Township 8, Range 1, west of the 4th Meridian, to within three-quarters of a mile of the Fox-Walsh road. The cost was somewhat higher than expected, as it was necessary to hire an outfit to do the work. It is hoped that the Department will supply this reserve with a Fordson tractor as we have a small grader and road drag suitable for maintenance work, but no power.

Personnel:

There has been no change in personnel since the spring of 1944.

Recreation:

Elkwater Lake and Graburn Gap are the two most attractive place in the Hills, the Rainbow trout fishing and the annual picnic and stampede being the main attractions at Graburn. Elkwater Lake Summer Resort has recently been turned over to the Parks Department, and it is understood they are dealing for private lands adjoining the park. It is hoped that this land will be acquired and that the park will be improved, as it is beautifully situated on the north side of the Cypress Hills only twenty-seven miles off the Trans-Canada Highway, and could be made into a very attractive summer resort. Improvements needed at Elkwater immediately are a water system and more streets built up.

Publicity:

In order to interest the school children, and through them the parents, in the forest and woodlore, the writer organized a field day to be held at Elkwater, and presented a cup to be competed for in a woodlore contest and sports, the cup to be won three years in succession before becoming the property of any one school. The first field day was held at Elkwater on July 6, 1945, nine schools taking part, and some very fine essays were written on woodlore. The writer visited all schools before the contest, and gave the children a short talk. At the time of writing, the second contest has been held, and there were twenty-three schools taking part.

Fish and Game Administration

REPORT OF THE FISH AND GAME COMMISSIONER,
E. S. HUESTIS

The fiscal year 1945-46 has been one of continued progress for the Fish and Game Branches of this Department. During the year a pheasant rearing station was constructed at Brooks in the Eastern Irrigation District, which proved to be very successful. At Calgary, large fish rearing ponds were constructed in the west end of the city on a flat adjacent to the Bow River. We continue to receive increased co-operation from the Alberta Fish and Game Association in the handling of the crow and magpie destruction campaign, and more predator birds were destroyed than during any previous year. Close co-operation continued with the Dominion Wildlife officials through the Wildlife Service at Ottawa and through the Parks Department. In the latter case a combined conference of Fish Hatchery personnel was held at Jasper. Our Game Advisory Council was enlarged to take in representatives of the farmers, the Indians and the fur dealers. In addition, the beaver program which has been so ably started in previous years was continued and a greater number of beaver were transferred from farm lands to the east slope of the Rocky Mountains for watershed protection.

Early in the spring of 1945 it was decided by the Department that it would be advisable to make use of large concentrations of pheasants with a resultant supply of pheasant eggs for the construction of a pheasant rearing station at Brooks. The Department of Agriculture was approached, and through that department and the courtesy of the Eastern Irrigation District officials, this Department was fortunate in securing a very fine piece of ground in the Horticultural Station within the town limits. This land was well treed, giving ample shade to the young birds after they were hatched. Sixteen buildings were constructed, one being set aside as an incubator house and the other fifteen as brooder houses. It was decided to purchase an electric Jamesway Incubator, 6,000 egg capacity, and fifteen electric brooders, 300 capacity, for the work. All buildings were wired and gas laid in. In addition, a water line was run to the incubator house from where it could be conveniently distributed to the various brooder houses. Attached to each brooder house was a runway constructed of one in ch mesh wire.

The collection of pheasant eggs was carried on through the very able co-operation of a number of school children in rural schools. Our Game Inspector, who acted as superintendent of the pheasant station, was careful to instruct the school children in the collection of eggs so that we would only secure those eggs which would otherwise be destroyed through cultivation of fields or the clearing and burning of irrigation ditches. The children were paid two cents each for the eggs. These children collected 14,762 eggs, of which 7,000 were required to fill the incubator. The balance were distributed mostly throughout the Province to local Fish and Game Associations, where they were raised under brooding hens, or in some cases by the use of electric or other incubators. In a number of cases this system proved to be quite successful. As a gesture of co-operation with our neighbouring provinces, 500 eggs were sent to the Fish and Game Associations in Manitoba and Saskatchewan and 200 to one of the local Associations in the Province of British Columbia.

The success of the first year's operations at the rearing station was greater than had been originally anticipated. It had been expected that with the initial operations and lack of a complete understanding of the handling of young

pheasants, that there would be considerable loss. However, the results of incubation gave a 70% hatch, which was considered extremely good. Some loss was encountered in the brooder houses, but these were rapidly overcome by making slight improvements from time to time. As a result of careful supervision by our superintendent, Mr. George Bray, it was possible to detect trouble at its inception and avoid any great loss during the rearing period.

Birds were released at six and seven weeks of age, and the co-operation of the Alberta Fish and Game Association and its various locals in assisting in the release of these birds was very much appreciated by the Department. The birds were shipped out in various quantities in shipping crates to local associations fairly well all over the Province. On arrival, the association took control of the birds, in some cases, keeping them in pens for a few days until they became acclimatized to the new environment, and then were released. In other cases they were released directly on arrival, and it would appear that in each case there was good survival of the birds in all districts. It is felt that this distribution of pheasants to areas where they have not been plentiful in the past will increase the population of birds in this area, giving the hunter the benefit of good shooting for this very coveted bird.

In continuation of the policy of the Fisheries Branch to distribute, as far as possible, yearling sport fish rather than fry, the Department has been continually searching for supplies of good water where rearing ponds can be constructed so as to hold fish over for a period of one year and release them when they have a better chance of survival than when they are in the fry stage.

With our large and well equipped hatchery at Calgary, it was logical to search for good rearing pond sites in the vicinity of Calgary. It was originally proposed that rearing ponds be constructed below Glenmore Dam, and when this was first proposed it looked like an excellent project. Unfortunately, however, the amount of water required for the proper handling of rearing ponds was so great that the city of Calgary Waterworks Department were unable to consider our request for sufficient filtered water from their plant. As a result, this project had to be abandoned.

One essential requirement for the proper rearing of fish in ponds is good clean filtered water. As a result, the various areas along the Elbow and Bow Rivers were tested for sources of water which might be tapped by way of wells. In most parts of the city of Calgary there is a flow of clean spring water through the gravel strata beneath the city. Water for our fish hatchery is taken from a well, and it was found to be of excellent quality for the raising of fish.

It was finally decided to run test wells in an area just south of the Bowness Road, near the western limits of the city of Calgary. A number of wells were drilled and tested, and sufficient water was found to proceed with the construction of ten large rearing ponds.

The Department is indebted to Mr. James Cross and the Calgary Brewing and Malting Company for their very great assistance in the drilling of the wells, construction of rearing ponds and the purchase of suitable pumps to put these rearing ponds in operation.

The Department is again indebted to the Alberta Fish and Game Association and its affiliated locals throughout the Province for the successful crow and magpie destruction campaign during 1945-46. During the summer campaign the Department paid out through the Association an amount in excess of \$7,300.00 for crow and magpie feet at five cents per pair. In addition, a further sum was placed at the disposal of the Association for a winter campaign on magpies. This campaign was not as successful as was hoped, due principally to the very deep snow conditions in most parts of the Province during the winter 1945-46. It is hoped that such a winter campaign will be more successful during the coming

winter. The crow and magpie campaign for the year destroyed 49,789 crows and 97,138 magpies.

In addition to the money paid by the Department to the local Associations for crow and magpie feet, many of these Associations augmented these funds by payment of a bounty on crow and magpie eggs. The efforts of the various locals concerned are to be commended, although the Department would rather pay a bounty on crow and magpie feet than on eggs.

The co-operation between the Wildlife Department of the Federal Government at Ottawa and in the Dominion Parks with this Department continues in a very satisfactory manner. This Department has assisted the Federal authorities in obtaining information through circulars in connection with the Snowshoe Rabbit and the Whooping Crane. On the other side of the ledger, the Federal authorities have been most helpful in supplying this Department with information in regard to the introduction of proposed new species of birds. There is also very close co-operation in the handling of wildlife matters, particularly the handling of fur as between this Province on the one hand and the Wood Buffalo Park and the Northwest Territories on the other hand. The royalty charged on fur in the various units is now almost identical, which assists the enforcement officials of both Departments in the orderly marketing and checking of the fur crop.

The propagation of sport fish is a similar problem for the Province and the Dominion Parks. The two administrations are working towards the same end in waters feeding into the same rivers, and as a result it was decided that the officials of the two administrations should get together in an effort to combine information and to assist each other. A very interesting and constructive Fisheries School was held by the two administrations at Jasper Park in the fall of 1945. This Department wishes to thank the officials of Jasper Park particularly, and in general the officials of the other parks in making this Fisheries School a very decided success and of great assistance to the personnel of this Department.

The Advisory Council continues to be of great assistance to the Fish and Game Administration in the Province. Through the Council, the Department is able to get the views of the sportsmen, scientists and others in the working out of the various problems under their administration. It was felt for some time that the Advisory Council should be enlarged to include representatives from other sections of people who are vitally interested in fish and game problems. As a result, the Council was enlarged this year to include Mr. Jonathan Wheatley of Chancellor as a representative of the farmers of the Province; Mr. Henry Stelfox, Indian Agent at Rocky Mountain House, to represent the Indians of the Province, and Colin W. McDonald of Edmonton, Secretary of the Alberta Fur Dealers' Association, to represent the fur dealers. It is hoped that when the registered trappers throughout the Province have organized sufficient local associations that a Provincial Association can be formed, from which a representative can be invited to sit on the Advisory Council and assist in the drafting of the regulations directly affecting the trapper. At the present time the Advisory Council is composed of the following: Dr. William Rowan and Dr. Richard B. Millar, representing the University of Alberta; Mr. George E. Watt, Mr. James A. McGhee and Mr. George J. Keltie, representing the Alberta Fish and Game Association; Henry Stelfox, representing the Indians; Jonathan Wheatley, representing the farmers; Mr. Colin W. McDonald, representing the fur dealers; Mr. D. E. Forsland, Superintendent of Game; Mr. H. B. Watkins, Superintendent of Fisheries, and Mr. E. S. Huestis, Fish and Game Commissioner, as Chairman.

The continuation of the careful handling of our beaver population in Alberta is desirable. Unfortunately, this animal is sought after by the poacher because of

the ease with which he is trapped and the high price obtained for his pelt. All of these poachers fail to realize that by careful protection we can build up our beaver population in the Province as a whole, and the individual trapper will benefit as years go by through proper marketing of the yearly increase. Continued poaching of what few beaver we have will only supply a meagre return today with nothing for the future. Times have been good for most people lately, and it was hoped that the poacher would allow this very fine animal to increase, not only for value of their fur, but for the much larger value that they have for the Province in the conservation of our water resources.

During the summer of 1945 it was necessary that the Department live-trap and move to new locations approximately 250 beaver. These animals were taken from farms and ranch property where they were causing damage and moved, in most cases, to the east slope of the Rocky Mountains, which is the watershed for the rivers flowing eastward through Alberta, Saskatchewan and Manitoba.

There continues to be close co-operation between this Province and the Provinces of Saskatchewan and Manitoba. This is particularly true of the Province of Saskatchewan, as it is our next door neighbour. A representative of this Department has attended the annual convention of the Saskatchewan Fish and Game League for the past three years, and at these conventions has been able to exchange information to the benefit of both Departments. In addition, there have been conferences from time to time of officials of the natural resources department in each Province in connection with the orderly marketing of our commercial fish and the orderly marketing of our fur crop. There is an atmosphere of co-operation in the urge to work out problems of mutual interest at these conferences, and they are of great assistance to all provinces concerned.

At the close of the fiscal year 1945-46, the Alberta fur breeders decided to transfer their allegiance to the Department of Agriculture. It is understood that fur farmers come under the supervision of the Department of Agriculture in most provinces throughout the Dominion, and it was the desire of these fur farmers that they should follow suit and come within the supervision of the department handling live stock raisers. This Department wishes them every success in their continued activities to build up for this Province, not only the largest fur farm industry of any province in Canada, but to produce the best quality of fur.

GAME BRANCH

Report of Game Superintendent, D. E. Forsland

During the fiscal year ending March 31st, 1946, the progress of the Game Branch has been continuous and noticeable. A good many recommendations for improving our Game Regulations have been received and acted upon. As a whole, the general outlook in the Province is very favourable, both in connection with big game and fur-bearing animals. There has been a sharp decline, of course, in our upland bird population, but this has to some extent been offset by the tremendous increase in migratory birds. As a whole, there is a steady and gratifying increase in all wild life in the Province, and it is gratifying to notice as well that the general public are beginning to awaken to the fact that game laws and game enforcement alone will not protect our wild life. The poaching of fur-bearing animals has been greatly reduced. Through a very praiseworthy co-operation which this Branch has received from all licensed fur dealers in this Province it has become practically impossible for illegally trapped fur to be put on the market in Alberta. What little poaching is done is mostly in connection with beaver, and practically any beaver pelt illegally taken in this Province is

by various means illegally transported out of the Province before being sold. The general public must share in the desire to protect game in order to ensure that our future generations will enjoy some of the hunting that we now enjoy in this Province.

During the last Session of the Legislature a new Game Act was introduced, and The Game Act previously enforced was rescinded. The Game Act, 1946, includes many of the more permanent sections which formerly were included in the Game Regulations, and an attempt has been made to reduce the volume of information contained in the Game Regulations to open seasons, open and closed zones and license fees, etc.

The work of the Branch is increasing yearly, which is clearly shown by the greater revenue derived from all sources of its operations, and relatively more money is being expended yearly by the Department for game enforcement and supervision.

The Advisory Council has rendered invaluable assistance in suggesting and recommending bag limits and open seasons as well as keeping the Branch posted on game conditions in general.

It is obvious that many items of interest pertaining to wild life resources could not be gone into in a report of this kind and that the matter can only be briefly touched upon, and therefore, in order to give a clearer picture of the activities of the Game Branch for the fiscal year ending March 31, 1946, I wish to report under the following headings:

Migratory Game Birds:

All migratory birds frequenting this Province showed a decided increase during this fiscal year, and the fall shooting of ducks and geese was reported by all hunters as being very excellent. The southern portion of the Province suffered somewhat from lack of water, and in consequence very few ducks were raised in the southern portion of the Province, but the northern hatch was very excellent and the fall migrations were heavy but somewhat earlier than usual. Ammunition, however, was still in short supply, and many hunters were unable to get the allotted bag owing to the shortage of shells. The excellent supply of ducks was reflected in the large bag limit allowed by the Migratory Birds Convention Act; to wit, twenty per day with one hundred and fifty for the season.

In previous years a considerable number of complaints used to be lodged at the Game Branch office in connection with damage caused by ducks to farm crops. These complaints have been practically eliminated by the provisions of Section 19(e) of The Migratory Birds Convention Act, which grants a blanket permit authorizing any farmer in the Province to shoot and kill migratory birds causing damage to farm crops any time prior to the regular open season.

Upland Birds:

The decline in upland birds, particularly ruffed grouse, sharp-tail grouse and Hungarian partridge is still very noticeable. This shortage has been very apparent over the last two seasons, and although there is an indication that prairie chicken and Hungarian partridge are on the up-trend of the cycle, it is fully expected that it will be necessary to enforce a closed season on these birds next year. The only district reporting any presence of Hungarian partridge was in the extreme south of the Province, and a short open season was provided for on Hungarian partridge in that part of the Province lying to the south of the Canadian Pacific Railway running from Calgary to Empress. There was also a short season on sharp-tail grouse (prairie chicken) in this same area, with a small bag limit of five per day only.

As a whole, the picture in connection with upland game birds, particularly ruffed grouse, spruce partridge and prairie chicken, is not very bright, but as I

have already mentioned, there are indications that the conditions are improving. The ring-neck pheasant, however, has increased to an enormous extent, and particularly is this the case in the Eastern Irrigation District. A number of birds were transferred from the Provincial Pheasant Farm at Brooks to various suitable districts throughout the Province, the distribution being recommended and handled by the various locals of the Alberta Fish and Game Association. The benefit from this distribution should be apparent within the next two or three seasons.

Big Game;

Of the big game animals in this Province, elk has perhaps shown the greatest increase, and it has become necessary to open new areas from time to time for the hunting of this beautiful big game animal. In some sections of the Province the elk has increased to such an extent as to become, if not actually a detriment, at least a problem. The elk in the district south of Pincher Creek, in the territory adjacent to and east of the Waterton Lakes Park as well as in the area east of the Waterton-Carbondale Game Preserve, has shown the greatest increase perhaps of anywhere in the Province. In this district the elk will from time to time come out on to the farmers' land and seriously damage stooked grain or hay in the stacks. The situation in that particular area is rather unique in that the elk remain in the Park and in the Game Preserve throughout the year with the exception of that part of the season when bad storms drive the elk herds down on to the farm lands. During the fall of 1945 it was found necessary, in order to protect farmers in the Pincher Creek area who were suffering damage to their grain and hay, to open the season on both male and female elk. The season was also extended in the spring up to and including April 30th to allow the shooting of any elk forced out of the Park and the Game Preserve by late spring storms.

Deer also show an increase, this being particularly true in the foothills region south of Calgary. Moose, however, are not as plentiful as they were years ago; this is indicated by the reports having been received from trappers, game officers, outfitters and guides. There may be various reasons for this, one being the theory that predators, i.e., timber wolves, do take a great toll of the moose calves, another being ravages from the moose tick. A heavily infested animal will in many cases be so poor in the fall of the year that it will not survive the rigors of the winter. Moose, however, do a certain amount of migrating, and a district which was counted as a good moose country one year may be practically without moose the next year. The reports from outfitters and guides in charge of various hunting parties would indicate that there is a certain amount of this migration of moose having taken place during the season 1945, and a good supply of moose is reported throughout the foothills region, south of Rocky Mountain House and throughout the southern portion of the Clearwater Forest. The extreme northern areas of the Province, mostly frequented by Indians and Breeds, such as the country around Calling Lake, the area north and east from the Wabasca Lakes and the area immediately adjacent to and north of Lesser Slave Lake, are practically depleted of moose. Some of the disappearance of moose in the last named areas can perhaps be blamed on the Indians hunting at any time of the year and also having authority to hunt cow moose.

Sheep and goat appear to be holding their own, particularly is this the case in connection with goat as practically all non-resident hunters, who reported back to this office after their fall hunt, reported seeing a large number of mountain goat. Sheep also appear to be quite plentiful, and reports have been received by the Branch that sickness, apparently contracted from domestic sheep, is rather rampant amongst bighorn sheep in the highwood range, on the Bow River Forest Reserve, and it may become necessary to curtail or entirely close the hunting of bighorn sheep in that district.

The antelope population in the south of the Province has for the past several years shown a steady increase, and the last survey being made of the antelope population in the Province would place the estimated number of antelope in the neighbourhood of thirty thousand animals, with heavy concentrations located in the area north and east of Suffield, in the Tilley district, and in the area south of Manyberries, in the south-east corner of the Province.

During the last season black and brown bear were still unprotected, and any person could shoot black or brown bear without a license anywhere in the Province, these regulations having been found necessary owing to the damage caused by bear to small live stock such as sheep, pigs, calves, etc., particularly in the Peace River District.

Alberta Fur Production:

For the fiscal year under review there is a slight reduction in the number of pelts taken from fur-bearing animals, the total number of pelts being 1,411,571 as compared with 1,696,140 for the previous season. However, in spite of this slight reduction in the number of pelts taken, the increased value of the fur brought the total value of pelts taken approximately thirty percent over the values of a year ago. The total value of pelts taken during the season under review was \$3,002,419.00 as compared with \$2,048,063.27 for the season 1944-1945. Fortunately for trappers, there was an increase in the take of all so-called short-haired fur, such as beaver, ermine and muskrats, the decline being mostly in the long-haired furs, such as the various types of foxes, lynx, etc. The number of squirrels taken was only 748,671 as compared with 1,277,922 pelts taken the year before, but the average price for squirrel pelts was exactly double the price obtained during the season 1944-1945, thus it will be noted that the return to the trapper was greater in value in spite of the reduction in the number of pelts.

The fur tax revenue also shows an increase over the previous season in spite of the lesser quantity of pelts taken, the increase being due to the fact that there was an increase in all higher priced furs such as beaver, muskrats and ermine.

Beaver and Muskrats:

During the year under review the Province produced a total number of 4,753 beaver pelts, which sold at an average value of \$40.85 each. Practically all these pelts were taken on registered trap-lines, this being the first time that beaver was allowed to be taken on registered trap-lines in the Province, irrespective of the location of such trap-lines. In previous years, the taking of beaver was entirely confined to trap-lines in that part of the Province lying to the north of Township 104; however, the beaver population of the Province has shown a steady increase, and it was felt that in order to recompense the registered trapper for his work in looking after and increasing the beaver population on his trap-line he should be allowed to take a certain percentage of the annual increase of beaver on his trap-line. A system of special permits was therefore inaugurated which allowed the trapper to take up to but not in excess of the estimated annual increase of beaver on his area.

In the southern portion of the Province, where there are no registered trap-lines, beaver could be taken under a special permit, where it was shown by an investigation that beaver was causing damage to farm property, such as field crops, the flooding of hay meadows or other type of damage. The Department issued sixty-seven of these special permits to farmers, authorizing the removal of beaver from their land. In some cases where beaver were causing damage to public property, such as bridges, culverts or roadways, the beaver would be removed by officials of the Department, in some cases by live-trapping and removal to other areas, in some cases by pelting the beaver, in which case the proceeds would go to the general revenue of the Province.

The trapping of muskrats followed very much the same pattern as the trapping of beaver, that is to say, any registered trapper could obtain a special permit to take muskrats on his trap-line. It was found necessary to issue special permits in order to prevent a registered trapper, whose area comprised mostly high land, fox and squirrel country, from trapping muskrats on neighbouring trap-lines, which would undoubtedly have been the case if such permits had not been issued in each instance. The fact that the muskrat catch was more than double the catch of the previous year would indicate that the muskrat population of the Province is slowly coming back, as the two prior seasons showed a great decline in the muskrat take of this Province. The total value of muskrat pelts taken during the season now under review was \$1,173,098.90, and accounting for a greater total value than any of the other fur-bearing animals.

Registered Trap-Lines:

During the season under review, the Province issued a total of 2,646 Certificates of Registered Trap-lines or Trapping Areas, this being the same number as was issued the year previous. It would appear from these figures that practically all areas suitable for registration as trap-lines have been taken up, and I do not expect a great increase from now on. In all probability there will be a slight increase in the number of registered trap-lines as time goes on, but this will be brought about mostly through an increased production of fur from each individual trap-line, which will in time allow for the cutting down in size of the registered trap-lines and trapping areas, thus giving room for an additional number of trappers. The benefit from the registered trap-lines is becoming more evident as time goes on as the fur production is showing a steady increase, not only in quantity but it is particularly noticeable in the quality of the fur produced; especially is this true in connection with beaver pelts. A few years ago, when beaver were taken on special beaver permits and not on registered trap-lines, the average value of beaver pelts was quite low and the percentage of medium and small pelts was very great, and today the registered trapper will take only the large beaver from his trap-line, and the greater percentage of beaver pelts produced today on registered trap-lines comprises blankets and extra large skins, and it would appear that the registered trapper is trying to avoid the taking of inferior pelts.

The number of registered trappers who are building dams for the impounding of water and constructing suitable muskrat marches and lakes is increasing yearly. Such improving of trapping areas was, of course, entirely out of the question before the institution of registered trap-lines and trapping areas.

Fur Farming:

The fur farming industry of this Province has shown a steady and noteworthy growth during the last few years, and this growth is particularly noticeable during the fiscal year now under review, the fur farmers having pelted 90,145 fur farm animals representing a total valuation of \$2,206,644.75 as compared with 76,241 pelts to the total value of \$1,836,933.70 of the season previous. The greater increase in these pelts, of course, being mink. It is also noted that chinchilla farming is still gaining recognition, the total number of chinchillas declared on fur farms now being 216 animals as compared with 136 the year previous.

Very close co-operation has always been maintained between the Game Branch and the fur farming industry of the Province, and undoubtedly the Province has at the present time as efficient and fair fur farming regulations as can be constructed. During the past season numerous fur farmers have been asked for their opinion as to the administration of our fur farming regulations, and they have invariably declared their satisfaction with regulations and treatment received from the Department.

Commencing with the new fiscal year, i.e., April 1, 1946, the fur farms will be transferred from the jurisdiction of the Department of Lands and Mines to the jurisdiction of the Department of Agriculture, and it is hoped that the same friendly co-operation will be maintained under the new management between the Department of Agriculture and the Alberta Fur Breeders Association.

Predatory Control:

As I mentioned earlier in my report in connection with big game, the general opinion amongst registered trappers and game officers is that timber wolves take of very large toll of not only big game animals but certain fur-bearers as well, particularly the muskrat and beaver. During the fiscal year now under review the Province has encouraged the destruction of timber wolves by the payment of a bounty in the amount of \$10.00 for timber wolves, this bounty also being payable on timber wolf pups, irrespective of age. The Province paid a bounty on 1,362 timber wolves, amounting to \$13,620.00. Bounty was also paid during the same period on 38 cougars at \$15.00 per cougar, amounting to \$570.00.

During the period April 1st to October 15th the Department paid a bounty of \$5.00 for each coyote or coyote pup, and under this bounty \$29,200.00 was paid, representing bounty on 7,840 coyotes. The bounty was paid only during the period of time that it was considered coyote pelts were unprime and therefore not of any commercial value, the bounty being removed at the approximate time that coyote pelts became of some commercial value.

As reported earlier bear, and particularly the black bear, has developed into quite a problem, particularly in connection with the destruction of smaller farm animals, but apart from being classed as a "predator" in connection with the taking of live stock, the black or brown bear is undoubtedly responsible for a tremendous destruction of ducks' nests. Investigations into the feeding habits of the black or brown bear show that in the spring he will hunt down and destroy a large number of the nests of migratory birds. The hunting of black or brown bear is permitted throughout the Province at any time of the year and without a license.

During the year the Department also rendered considerable financial assistance to the Alberta Fish and Game Association in carrying out a campaign for the destruction of crows and magpies, and great credit must be given to the Association for the amount of work as well as money expended by them in the eradication of these pests.

Game Preserves and Bird Sanctuaries:

No new Game Preserves or Bird Sanctuaries were created during the period under review, and the number of Game Preserves and Bird Sanctuaries remains the same as in previous years.

Enforcement:

During the fiscal year under review, 209 convictions were obtained in prosecutions for various infractions of The Game Act. These prosecutions covered practically all the various regulations, but the majority of convictions were in connection with illegal possession of the pelts of fur-bearing animals, or for the trapping out of season of fur-bearing animals. Apart from the investigations involved in securing these convictions, there were numerous investigations conducted by the Game Branch into suspected infractions where it was impossible to obtain sufficient evidence to warrant prosecution of the suspected offenders. During these investigations a considerable number of firearms, as well as ammunition, were confiscated to the Crown in the right of the Province, and all such confiscated firearms are turned over to the Department of the Attorney General for disposal.

Any pelts of fur-bearing animals confiscated in connection with prosecutions are sold on public auction to the highest bidder, and the amount realized for the period under review amounted to \$11,463.67. Any other smaller equipment, such as traps of various sizes, snares, etc., are also sold to the highest bidder and any amount realized from such sales is accounted for in our miscellaneous revenue, which during this fiscal year amounted to \$806.00.

As in the past, the Royal Canadian Mounted Police must be mentioned in connection with enforcement of The Game Act and the Game Regulations. The officers and other ranks of "K" Division, Royal Canadian Mounted Police, have shown the greatest willingness to co-operate with the Game Branch, and it is difficult to visualize an efficient enforcement of the game laws of this Province without the able assistance of this Force.

Past experience clearly indicates that law enforcement is not enough to solve the problem of game conservation. It is necessary that the public realize the value of game as a natural resource and that it must be conserved and used with intelligence and discretion. It is impossible for the Game Branch with its limited number of enforcement officers to preserve this natural resource for posterity unless the public as a whole is willing to co-operate, and unless the public will come to realize that game laws are made to protect a natural resource belonging to them and not for the purpose of interfering with or retarding their hunting pleasures.

Summary:

In concluding this report, may I say that I consider the season of 1945-1946 has been a very satisfactory year. Big game is most assuredly on the increase, and although the upland birds are at present at a very low ebb, there is every indication that this condition is improving. The fur catch in particular has been very satisfactory, and the trappers were fortunate in so far that the fur most abundant during this fiscal year was that type of fur which brought the highest market prices, resulting in a return to the trappers and fur farmers of this Province in the amount of \$5,209,063.75, which is an all-time high amount realized for fur taken, exceeding as it does the season 1941-1942 (the previous record high) by \$46,428.00; but apart from the money realized by trappers and fur farmers, the total revenue to the Province from the operations of the Game Branch is also at an all-time record high, reaching as it did the amount of \$233,173.34.

ALBERTA FUR PRODUCTION—SEASON 1945-46

	Total Number of Pelts	Average Value of Pelts	Total Value of Pelts
Badger	1,107	\$ 2.00	\$ 2,214.00
Bear	164	3.50	574.00
Beaver	4,753	40.85	194,160.05
Ermine	173,263	3.15	545,778.45
Silver Fox	321	15.85	5,087.85
Cross Fox	2,477	12.20	30,219.40
Red Fox	6,226	6.25	38,912.50
Blue Fox	30	17.00	510.00
White Fox	8	25.00	200.00
Lynx	553	32.50	17,972.50
Marten	750	58.75	44,062.50
Mink	2,778	35.60	98,896.80
Muskrat	378,419	3.10	1,173,098.90
Otter	93	31.65	2,943.45
Rabbit (Jack)	68,559	.85	58,275.15
Skunk	9,155	1.35	12,359.25
Squirrel	748,671	.90	673,803.90
Coyotes	13,669	7.20	98,416.80
Timber Wolf	535	8.10	4,333.50
Wolverine	40	15.00	600.00
	<u>1,411,571</u>		<u>\$3,002,419.00</u>

NUMBER OF LIVE ANIMALS EXPORTED—SEASON 1945-46

	Total Number of Animals	Average Value per Animal	Total Valuation
Fox:			
Silver	1	\$100.00	\$ 100.00
Platinum	7	150.00	1,050.00
Arctic Blue	15	40.00	600.00
Mink:			
Standard	257	50.00	12,850.00
Silver-blue	25	175.00	4,375.00
Blue Frost	4	150.00	600.00
Black Cross	5	150.00	750.00
Blue Cross	3	175.00	525.00
Other Mutations	32	50.00	1,600.00
Chinchilla	6	350.00	2,100.00
Marten	22	90.00	1,980.00
Fitch	6	10.00	60.00
Lynx	4	80.00	320.00
			<hr/> \$ 26,910.00

CONVICTIONS UNDER THE GAME ACT, 1945-46

Number of convictions	209
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CONFISCATED FURS

Amount realized from the sale of confiscated furs during the period April 1st, 1945, to March 31st, 1946	\$11,463.67
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TRAPLINE REGISTRATIONS

Number of Registered Traplines and Revenue, April 1st, 1945, to March 31st, 1946	2,646	\$26,460.00
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FUR DEALERS' LICENSES, ETC.

Resident fur dealers' licenses to carry on business in a city, and elsewhere than in a city	440	\$ 5,030.00
Non-Resident fur dealers' licenses to carry on business in the Province	6	600.00
Resident Travelling Fur Purchasing Agents' licenses	45	1,125.00
Tanners' Licenses	3	30.00
Furriers' Licenses	19	190.00

FUR TAX REVENUE

Amount collected	\$89,769.17
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MUSKRAT AND BEAVER PERMITS ISSUED

Muskrat permits issued	296
Muskrat reported taken	9,538
Beaver permits	155
Beaver reported taken	655

GAME LICENSES—PERIOD APRIL 1st, 1945, TO MARCH 31st, 1946

	Number of Licenses	Fee	Total Amount
Resident's Bird Game	16,258	\$ 2.00	\$ 32,516.00
Non-Resident's Bird (Canadian)	202	5.00	1,010.00
Non-Resident's Bird (Non-Canadian)	127	25.00	3,175.00
Resident's Big Game	9,881	3.00	29,643.00
Resident Trapper's	2,628	2.00	5,256.00
Guest Game Bird (Canadian)	3	2.00	6.00
Guest Game Bird (Non-Canadian)	27	5.00	135.00
Non-Resident's General Game	112	50.00	5,600.00
Permit to Collect	15	Various	634.00
Taxidermist's	7	5.00	35.00
Resident's Special	86	5.00	430.00
Non-Resident's Special	76	25.00	1,900.00
Guide's	90	2.50	225.00
Game Farms	2	5.00	10.00
Outfitters	37	Various	1,325.00
Resident's Special Antelope	881	5.00	4,405.00
Non-Resident's Special Antelope	24	15.00	360.00
Non-Resident's Permit to Export	87	Various	4,879.50
Fur Farmer's	1,342	Various	6,088.00
Beaver Permits	67	1.00	67.00
			<hr/> \$ 97,699.50

BOUNTY ON TIMBER WOLVES, COYOTES AND COUGARS—SEASON 1945-46

1,286 Timber Wolves—at \$10.00 each	\$12,860.00
38 Cougars—at \$15.00 each	570.00
7,840 Coyotes—at \$5.00 each	39,200.00
	<hr/> \$52,630.00

DEPARTMENT OF LANDS AND MINES

NUMBER OF ANIMALS DECLARED ON FUR FARMS IN ALBERTA—SEASON 1945-46

	Total Number of Animals	Average Value per Animal	Total Valuation
Fox:			
Silver	10,156	\$ 23.75	\$ 241,205.00
White Marked	10,819	29.25	316,455.75
Platinum	3,541	47.50	168,197.50
Platinum Silver	2,730	45.00	122,850.00
Pearl Platinum	450	35.00	15,750.00
Pearlatina	338	35.00	11,830.00
Glacier Blue	4	60.00	240.00
Arctic Blue	966	18.00	17,388.00
Cross	345	14.00	4,830.00
Red	78	8.00	624.00
Mink:			
Standard	133,305	27.50	3,665,887.50
Silver-blu	1,810	140.00	253,400.00
Blue Frost	591	128.00	75,648.00
Black Cross	634	128.00	81,152.00
Blue Cross	21	150.00	3,150.00
Pastel	75	150.00	11,250.00
Mink, 95% White	71	70.00	4,970.00
Snow White	2	70.00	140.00
Other Mutations	788	35.00	27,580.00
Chinchilla	216	300.00	64,800.00
Marten	92	90.00	8,280.00
Fitch	384	5.00	1,920.00
Nutria	93	5.00	465.00
Lynx	8	90.00	720.00
Raccoon	23	4.00	92.00
Coyote	12	8.00	96.00
	167,552		\$5,098,920.75

NUMBER OF ANIMALS PELTED ON FUR FARMS—SEASON 1945-46

	Total Number of Animals	Average Value per Animal	Total Valuation
Fox:			
Silver	7,403	\$ 19.50	\$ 144,358.50
White Marked	5,410	23.25	125,782.50
Platinum	1,110	42.50	47,175.00
Platinum Silver	1,009	40.75	41,116.75
Pearl Platinum	32	27.50	880.00
Pearlatina	43	31.00	1,333.00
Arctic Blue	610	17.50	10,675.00
Cross	317	14.00	4,438.00
Red	62	8.00	496.00
Mink:			
Standard	73,216	24.50	1,793,792.00
Silver-blu	125	90.00	11,250.00
Blue Frost	159	70.00	11,130.00
Black Cross	28	72.50	2,030.00
Other Mutations	270	33.50	9,045.00
Chinchilla	40	23.00	920.00
Marten	10	58.00	580.00
Fitch	280	5.50	1,540.00
Nutria	3	3.00	9.00
Raccoon	8	2.75	22.00
Coyote	12	6.00	72.00
			\$2,206,644.75

NUMBER OF ANIMALS RETAINED FOR BREEDING STOCK—SEASON 1945-46

Fox:	Total Number of Animals	Average Value per Animal	Total Valuation
Silver	2,752	\$ 30.00	\$ 82,560.00
White Marked	5,409	35.00	189,315.00
Platinum	2,424	57.50	139,380.00
Platinum Silver	1,721	55.00	94,655.00
Pearl Platinum	418	40.00	16,720.00
Pearlatina	295	40.00	11,800.00
Glacier Blue	4	60.00	240.00
Arctic Blue	341	25.00	8,525.00
Cross	28	15.00	420.00
Red	16	12.00	192.00
Mink:			
Standard	59,831	40.00	2,393,240.00
Silver-blu	1,660	175.00	290,500.00
Blue Frost	428	150.00	64,200.00
Black Cross	601	150.00	90,150.00
Blue Cross	18	175.00	3,150.00
Pastel	75	175.00	13,125.00
95æ White	71	75.00	5,325.00
Snow White	2	75.00	150.00
Other Mutations	486	40.00	19,440.00
Chinchilla	170	350.00	59,500.00
Marten	60	90.00	5,400.00
Fitch	98	10.00	980.00
Nutria	90	5.00	450.00
Lynx	4	80.00	320.00
Raccoon	15	5.00	75.00
			<u>\$3,489,812.00</u>

LICENSED ALBERTA FUR FARMS, 1945-46

Mink	980	Mink, Muskrat and Fox	1
Fox	189	Fox and Nutria	1
Beaver	4	Mink and Nutria	1
Muskrat	3	Mink, Fitch and Fox	1
Marten	1	Beaver, Muskrat and Mink	1
Chinchilla	8	Fox and Lynx	1
Nutria	5	Fox, Mink, Raccoon and Chinchilla	1
Fitch	3	Fox and Coyote	1
Mink and Fox	54	Fox, Mink, Raccoon and Fitch	1
Mink and Chinchilla	1	Fox and Chinchilla	1
Mink and Fitch	6	Mink and Muskrat	1
Mink and Marten	5	Beaver and Muskrat	1
Mink and Coyote	1		
Mink, Nutria and Weasel	1		
Mink, Fitch and Chinchilla	1		
			<u>1,274</u>

FISHERIES

Report of the Superintendent of Fisheries, H. B. Watkins

The commercial fisheries of the Province have passed through a very active year with a total production of over eight and one-half million pounds of fish, which was readily absorbed by the market. Prices to producers for the better quality table fish were good, and reached the high peak towards the middle of the winter season. The year's catch shows an increase of more than eight hundred thousand pounds over the previous year, and the high market value placed on our fish reflects the keen demand for fish by the export trade. At times throughout the year the home market was in short supply and could not compete with prices offered by exporters for fresh whitefish and pickerel. The policy of surveying whitefish lakes to determine the acceptable quality of the fish was continued, and a total of 64 surveys have been made, twelve lakes being resurveyed during the year. The present situation in respect to our whitefish lakes presents a very favorable picture for the future, inasmuch as over eighty percent of the whitefish produced are of a quality not necessitating processing by candling or filleting. However, in order to maintain a quality production rather than quantity, it was considered advisable to curtail the whitefish catch on seven lakes in areas more or less remote from market centres.

It has become apparent that along with the increase in commercial production and higher prices paid to producers, there has been a corresponding increase in the number of people taking out commercial licenses, which has proven an administrative problem as well as putting the industry at certain lakes in an unsound economic state. In well settled districts, high prices and the relatively easy method of winter fishing have attracted a large number of local residents, with the result that the number of fishermen in relation to the poundage limitation and the value of the catch is top-heavy and must in many instances be a costly venture.

Demands for fish food supply to fur farmers were met satisfactorily during the year, but whether the future supply can satisfy the demand will depend on the number of fur-bearing animals being ranch raised. The potential fish food supply is not much greater than the present production, and fur farmers would be well advised not to depend solely upon local supplies of fish should the fur farming industry expand in the near future. Failure of fur farmers to provide storage facilities for fish during closed seasons and periods of scant supply has caused some difficulties and problems, and in order to meet any impending serious emergency the Fisheries Branch has provided the means whereby fish food supply has been available throughout the entire year. The drain upon our lakes in meeting the demand of fur farmers should not be disregarded, and conservation measures will, of necessity, have to be considered in the immediate future.

In the field of the sportsmen, streams and lakes yielded an improved catch over the previous year, and losses through flooding and drought were negligible. However, on the other hand, severe damage was occasioned in some streams to the trout population during the winter through winter killing. The problem of winter losses of trout is becoming very noticeable, and a study of winter stream management is now under way. Surveys were made during the year of a number of our angling streams and lakes, and although these were of a preliminary nature, much valuable information was obtained particularly in respect to planning a better restocking programme in the waters already examined.

Recognizing the need for increased facilities for raising yearling trout species, work on twelve new ponds was commenced during the fall on a site in the Westmont district in Calgary, and these ponds were put into operation during the month of December. This new set of ponds differ from the previous ponds constructed elsewhere in the Province, being considerably larger and much deeper, and obtaining their water supply from a series of wells feeding a header canal. It is estimated that this new construction will afford a distribution of a further five thousand yearling trout when operated to capacity.

The spectacular results obtained from the fertilization of warm water ponds has led to a demand for similar work in our colder waters of Alberta. Accordingly, the trout rearing ponds located at Pincher Creek were selected for a controlled experiment in fertilization. Two tons of Nitroprills, a fertilization product of the Alberta Nitrogen Products Limited, were donated for the experiment by this company through permission of the Allied War Supplies Corporation. The experiment began on August 3rd and continued to November 27th; five pounds of Nitroprills being added daily to the experimental pond. Temperature, dissolved oxygen and pH of the control and experimental ponds were determined weekly, plankton samples obtained every two weeks and one hundred trout taken and weighed at the same time. Ten or more fish were taken from each sample and preserved for measuring, and analyses of the nitrogen content were made at intervals throughout the experiment. Omitting technical details, it was found that adding the fertilizer had no measurable effect on the nitrogen content of the experiment pond. The planktonic algae showed no difference in either quantity or species in both ponds while the filamentous algae developed

abundantly except in the experimental pond, this algae being killed by the fertilizer. The fish grew at the same rate in both ponds. Since the addition of the fertilizer failed to increase the total nitrogen content of the pond, it is not surprising that increased growth of the fish did not occur. Under the conditions of the experiment where the water in the pond changes four times daily, the fertilizer is apparently borne away before it can exert much effect except for its effect on the filamentous algae (*Spirogyra*) which was killed in the experimental pond. The effects of the fertilizer showed up in the pond below the experimental pond where the nitrogen content of the water was raised from 1.48 to 4.8 p.p.m. This increased content stimulated a more luxuriant algae growth and apparently was responsible for a small increase in growth of the trout. The use of nitrogen fertilizer in rearing ponds with running water appears to result in such small benefits as to be impractical. The same difficulties may be anticipated in any attempts to fertilize natural trout streams.

FISHERIES		1944-45	1945-46
REVENUE:			
Angling Permits		\$13,039.50	\$13,511.85
Fishing Licenses		18,846.00	26,138.00
Boat Licenses		45.00	45.00
Casual		1,333.60	1,623.83
Licenses and Permits		10,539	12,288
Prosecutions		72	42
Confiscations		74	52
Commercial Fish Catch (lbs.)		7,725,371	8,584,005
PROSECUTIONS:		1944-45	1944-45
Fishing without license		8	10
Excess of per diem limit		1	...
Fishing out of season		6	4
Using illegal gear .....		...	1
Obstructing passage of fish		1	...
Pollution		1	3
Shooting fish		2	...
Taking illegal sized fish		1	1
Illegal possession of fish		9	9
Illegal sale of fish		1	1
Using gill nets in stream		2	1
Operating illegal nets		37	9
Operating nets without markings		1	...
Operating nets other than licensee		2	3
		<u>72</u>	<u>42</u>

DEPARTMENT OF LANDS AND MINES

QUANTITIES AND VALUE OF FISH CAUGHT AND MARKETING

Species	Period	Weight (lbs.)	Value to Fisherman	Value as Marketed
Whitefish	May 16/45 to Sept. 30/45	895,617	\$102,465.69	\$ 222,163.66
	Dec. 1/45 to Dec. 31/45	449,317	44,507.41	137,041.69
	Jan. 1/46 to Mar. 31/46	1,968,687	368,504.93	610,292.97
			3,253,621	\$ 515,478.03
Trout (Lake)	May 16/45 to Sept. 30/45	31,359	\$ 3,135.90	\$ 8,466.93
	Dec. 1/45 to Dec. 31/45	48,501	8,167.00	20,570.42
	Jan. 1/46 to Mar. 31/46			
			79,860	11,302.90
Pickereel	May 16/45 to Sept. 30/45	634,336	\$ 52,169.52	\$ 143,989.10
	Dec. 1/45 to Dec. 31/45	127,372	10,724.17	34,930.44
	Jan. 1/46 to Mar. 31/46	84,375	11,945.64	21,546.88
			846,083	74,839.33
Pike	May 16/45 to Sept. 30/45	298,397	\$ 7,295.42	\$ 22,262.98
	Dec. 1/45 to Dec. 31/45	121,995	4,056.56	10,979.55
	Jan. 1/46 to Mar. 31/46	237,445	11,753.24	28,493.40
			657,837	23,105.22
Tullibee	May 16/45 to Sept. 30/45	1,781,602	\$ 62,926.75	\$ 79,317.59
	Dec. 1/45 to Dec. 31/45	886,914	15,761.71	37,693.85
	Jan. 1/46 to Mar. 31/46	706,008	14,376.90	31,770.36
			3,374,524	93,065.36
Perch	May 16/45 to Sept. 30/45	105,530	\$ 9,303.96	\$ 17,747.92
	Dec. 1/45 to Dec. 31/45	7,094	410.60	993.16
	Jan. 1/46 to Mar. 31/46	92,423	11,585.86	19,484.60
			205,047	21,300.42
Mixed Fish (Ling, Suckers)	May 16/45 to Sept. 30/45	131,443	\$ 2,441.32	\$ 4,894.34
	Dec. 1/45 to Dec. 31/45	26,040	468.40	730.80
	Jan. 1/46 to Mar. 31/46	9,550	97.50	286.50
			167,033	3,007.22
			8,584,005	\$ 742,098.48
				\$1,451,717.14

NUMBER AND VALUE OF VESSELS, BOATS, FISHING GEAR AND EQUIPMENT

	1941-1942		1942-1943		1943-1944		1944-1945		1945-1946	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Vessels, Boats:										
Row	145	\$ 5,095.00	133	\$ 4,290.00	186	\$ 3,420.00	146	\$ 3,340.00	132	\$ 6,134.00
Gasoline	119	34,070.00	107	31,545.00	208	86,380.00	181	55,850.00	222	83,380.00
Diesel .....	.....	.....	.....	.....	3	5,900.00	1	5,900.00	1	5,900.00
Barges .....	.....	.....	.....	.....	1	16,000.00	3	16,000.00	3	16,000.00
	264	\$ 39,165.00	240	\$ 35,835.00	398	\$111,700.00	327	\$ 81,090.00	338	\$111,814.00
Piers and Wharves:										
Summer .....	.....	.....	.....	.....	9	\$ 4,474.00	29	\$ 5,040.00	31	\$ 7,000.00
Winter .....	.....	.....	.....	.....	6	2,300.00	6	2,300.00	20	8,600.00
Fish Plants and Ice Houses:										
Summer .....	.....	.....	.....	.....	23	16,847.00	127	42,245.00	63	34,750.00
Winter .....	.....	.....	.....	.....	10	3,350.00	41	31,400.00	41	74,600.00
Gill-Nets:										
May 16-Sept. 30	2,403	\$ 48,100.00	1,755	\$ 35,100.00	4,697	\$ 93,940.00	3,803	\$ 65,360.00	5,716	\$ 95,529.50
Dec. 1-Dec. 31	2,149	42,980.00	2,193	43,860.00	3,665	64,970.00	2,738	37,926.00	3,700	49,238.00
Jan. 1-Mar. 31	5,799	115,980.00	4,937	98,740.00	8,806	157,532.00	7,043	92,888.00	12,949	194,817.00

DEPARTMENT OF LANDS AND MINES

COMMERCIAL PRODUCTION OF FISH

Species	1941-42 Lbs.	1942-43 Lbs.	1943-44 Lbs.	1944-45 Lbs.	1945-46 Lbs.
Whitefish	2,296,676	1,916,496	2,374,532	2,655,016	3,253,621
Trout	32,393	18,556	21,716	21,492	79,860
Pike	495,167	504,674	585,519	430,150	657,837
Pickereel	265,636	254,337	840,164	994,659	486,083
Perch	46,958	75,816	128,628	152,643	205,047
Tullibee	2,470,412	3,324,864	3,596,665	3,319,306	3,374,524
Mixed Fish	312,857	64,140	210,297	152,105	167,033
Totals	5,920,099	6,158,883	7,757,521	7,725,371	8,584,005

	Weight (lbs.)	Value to Fishermen	Value as Marketed
Totals for year 1941-1942	5,920,099	\$ 198,400.38	\$ 437,137.38
Totals for year 1942-1943	6,158,883	283,622.41	606,970.32
Totals for year 1943-1944	7,757,521	481,498.25	973,777.86
Totals for year 1944-1945	7,725,371	418,653.49	863,138.28
Totals for year 1945-1946	8,584,005	742,098.48	1,451,717.14

LICENSES AND PERMITS

	1941-42	1942-43	1943-44	1944-45	1945-46
Angling Permits (Seasonal)	6,510	5,537	5,920	6,296	6,503
Angling Permits (Limited) .....	.....	327	460	355	427
Domestic Licenses	266	317	522	417	479
Fisherman's Licenses	1,437	1,571	2,868	3,323	4,700
Commercial Licenses	135	77	124	142	173
Motor Boat Licenses	12	3	3	4	6
Totals	8,360	7,832	9,898	10,539	12,288

DISTRIBUTION, 1945

LOCH LEVEN AND EASTERN BROOK (SPECKLED) TROUT

Clearwater River:	Yearlings
Big Timber Creek	4,000
Tay River	6,000
Biddie Creek dams	6,000
Prairie Creek	18,000
Musky Creek	5,000
Alfred Creek	5,000
	44,000

Red Deer River:	Yearlings		Yearlings
Spring Creek	6,000	James River	8,000
Derbytown Creek	4,000	Steven Creek	8,000
Bearberry Creek	4,000	Twin Springs dams	1,000
Griswald Creek	3,000	Gibson Creek	1,000
Dennison Creek	3,000	South Raven (west)	10,000
Twin Bridges	4,000	North Raven	6,000
Grant Creek	5,000	South Raven (east)	4,000
Gastle Creek	1,000	Eagle Creek dams	6,000
Crooked Creek	8,000		
East Stony Creek	5,000		92,000
Peskse Creek	3,000		
Rose Creek	2,000		

Bow River:	
Elbow River (Eastern Brook Trout)	1,200

RAINBOW TROUT

Old Man River:	Yearlings		Yearlings
Pincher Creek	7,000	Crowsnest River	10,000
Mill Creek	12,000	Livingstone Forks	10,000
Beaver Mines Creek	5,000	Old Man River	5,000
Beaver Creek	2,500		
Castle River	20,000		71,700
Buck Horn dams	200		

Waterton River:	Yearlings
Yarrow Creek	10,000
Drywood River	10,000
Carpenter Creek	10,000
Pine Creek	10,000
Cottonwood Creek	10,000
Lees Creek	6,000
	56,000

Burmis Lake, yearlings	500
Elbow River, two years and over	500

Athabasca River:		No. 3 Fingerlings			No. 3 Fingerlings
Erith River	5,500		Sundance Creek		3,500
Shaw Dam	3,000		Wolf Creek		8,000
Spring Creek	3,000		Lobstick River		7,000
MacLeod Beaver dams	6,000		Carrot Creek		8,000
Wye Lake	3,000				<u>59,000</u>
Sulphur Creek dam	6,000				
MacLeod River	6,000				
Cypress Hills:					No. 3 Fingerlings
Battle Creek					4,000
Grayburn Creek					4,000
					<u>8,000</u>

RAINBOW

	Yearlings	2-year-olds	No. 3 Fing.
Highwood River	13,000		
Sheep River	4,000		
Elbow River	15,000	5,000	
Flat Creek			15,000
Sullivan Creek			15,000
Pekisko Creek			30,000
Lyndon Creek	8,000		
Trout Creek	4,000		
Hidden Lake			10,000
	<u>44,000</u>	<u>5,000</u>	<u>70,000</u>

ADULT PERCH

Nakamun Lake	10,975	Sylvan Lake	27,000
Crimson Lake	21,900	Fish Lake (near Hardisty)	12,000
Blindman River	2,000	Whitewood Lake	12,000
Hastings Lake	20,000	Elkwater Lake	15,000
Dried Meat Lake	24,500		
Hardisty Lake	14,800		<u>172,175</u>
Gull Lake	12,000		

PICKEREL

	Fingerlings		Fingerlings
Sylvan Lake	2,600	Gull Lake	1,200
Dried Meat Lake	2,500	Fish Lake (near Hardisty)	1,600
Hastings Lake	2,000		
Nakamun Lake	1,250		<u>12,650</u>
Hardisty Lake	1,500		

MINNOWS (SPOT-TAIL)

Hastings Lake	1,000	Fish Lake	600
Dried Meat Lake	1,000	Nakamun Lake	1,000
Hardisty Lake	700		
Gull Lake	600		<u>6,300</u>
Sylvan Lake	1,400		
Total Distribution			<u>609,725</u>

PRELIMINARY BIOLOGICAL SURVEYS MADE DURING 1945

Athabasca watershed:
 Gregg Lake and connected waters,
 Soloman Creek,
 Prairie (Maskuta) Creek,
 Cold and Hardisty Creeks,
 Obed Lake and Obed Creek,
 Creeks at Hargwen,
 Sundance, Hornbach and Trout Creek;

Calgary Power Company Reservoir, Camrose,
 Canals and Lakes, Youngstown district,
 Major Lake, Secs. 14 & 15, 25-9 W. 4th Mer.,
 Greenlees Lake, Tp. 37-4, W. 4th Mer.,
 Long Lake, Tp. 41-1, W. 4th Mer.,
 Arm Lake,
 Clear (Barnes) Lake.

Mining Lands Administration

REPORT OF THE SUPERINTENDENT OF MINING LANDS, H. H. SOMERVILLE

This report is for a year which has seen the successful completion of a desperate war, and the hope for endless peace is the prayer of all.

The calendar year of 1945 saw the greatest production of coal in the history of the Province, with an increase over the previous year of 373,815 tons. There was a decrease of 733,286 barrels in the production of oil as compared to 1944.

The production and value of Alberta's chief minerals for 1945 were as follows: coal, 7,801,248 tons, valued at \$27,699,333; petroleum, 8,055,440 barrels, valued at \$13,169,692; natural gas, 43,746,338 Mcf., valued at *\$2,187,367; and salt, 29,362 tons, valued at \$293,620.

Mineral rights, solid, liquid and gaseous, the property of the Crown in the right of the Province, are not sold, but are disposed of by lease, reservation, permit or grant for limited periods of time. The Division is responsible for the administration of regulations governing these rights on both Provincial and school lands. Revenue is obtained from fees, rentals, bonuses and royalties, and during the fiscal year a total of \$1,449,266.16 was received.

Activity continued under the regulations governing the reservation of petroleum and natural gas rights for geological and/or geophysical examination, including any investigation relating to sub-surface geology, and during this fiscal year more than five million acres were granted under prospecting reservation. Before commencing or undertaking any geophysical operations, or the examination of the sub-surface geology in the Province, a license must be procured from this Division at a fee of \$25.00, and during the fiscal year 18 licenses were issued.

Six reservations of petroleum and natural gas rights in Smoky River Provincial Reserve were offered for sale by tender, and one was sold comprising township 56, range 4, townships 56, 57 and 58, ranges 5 and 6, and townships 57 and 58, range 7, west of the 6th meridian. The reservation requires the performance of a geophysical examination of the area and was granted for a period of ninety days, renewable for further periods of not more than ninety days each, but not to exceed twenty-four months from the date of issue.

The Department entered into an agreement permitting the operation of the Jumping Pond area as a unit whereby wells could be drilled either on Crown or freehold lands for the production of petroleum and natural gas, and the Crown is to receive a royalty on the products recovered in the proportion that the Crown acreage bears to the total acreage of the unit.

The Hudson's Bay Company and Canadian Pacific Railway Company agreed to permit their petroleum and natural gas rights to be unitized with Crown rights in the Vale Dome area. One section was included by the Hudson's Bay Company, ten sections by the Canadian Pacific Railway Company with thirteen Crown sections, and the lease of the unit area was sold by tender. This unit differs from the one at Jumping Pond in that the Department administers the unit and pays to the Companies their proportionate shares of the revenue derived.

An interesting oil well shooting experiment was carried out at Westflank No. 2 Well in Turner Valley, in an endeavour to increase its oil production. The usual procedure in shooting a well is to lower nitro-glycerine in a can to the bottom of the well and ignite it by means of a time bomb. In this experiment,

*Based on well-head valuation of 5c per Mcf.

however, an extra large shot of nitro-glycerine of 5,200 quarts was poured into the well through a string of tubing, and most of the charge was forced into the formation before it was exploded. There will be a delay before the result of the experiment is known, but it is expected that this large explosion will be more effective in breaking up the formation.

The date for commencement of drilling on petroleum and natural gas leases issued by the Province was extended for one year to April 1, 1947, by Order in Council No. 197/46, because of continued restrictions resulting from the war and the shortage of labour, materials and equipment.

During the year, 964 applications for mineral rights were made at the offices of the Mining Recorders at Edmonton, Calgary and Peace River, which required the preparation of a similar number of files for the Division. Several inquiries were made as to the availability of mineral rights, mostly for petroleum and natural gas leases or reservations, by personal application or by correspondence. The Division dispatched a total of 18,996 letters during the year under review.

The natural resources of Alberta were transferred from the Dominion Government to the control of the Government of Alberta on October 1st, 1930, and the following tabulation shows the numbers and acreages of the various leases issued from that date to March 31st, 1946.

MINING LANDS LEASES

Type of Lease	Active at date of transfer	Issued	Reinstated	Divided	Cancelled	Renewed	Active at March 31st, 1946
Petroleum and natural gas	18,863	12,346	153	665	28,328	198	3,501
Petroleum and natural gas, crown reserve	5	20	.....	.....	25	.....	.....
Coal, provincial lands	620	583	3	7	672	189	352
Coal, school lands	60	42	1	.....	61	8	34
Quarrying	45	87	.....	.....	65	5	62
Quartz mining	4	.....	.....	.....	.....	.....	4
Salt	1	1	.....	.....	1	.....	1
Bituminous sands	4	3	.....	.....	6	.....	1
Miscellaneous	1	4	.....	.....	3	1	1
Dredging	32	8	.....	.....	40	.....	.....
TOTALS	19,635	13,094	157	672	29,201	401	3,956

ACREAGE CONTAINED IN ABOVE LEASES

Type of Lease	Active at date of transfer	Issued	Reinstated	Cancelled	Renewed	Active at March 31st, 1946
Petroleum and natural gas	2,454,802	3,766,816	29,467	4,514,812	23,826	1,712,447
Petroleum and natural gas, crown reserve	6,160	22,561	.....	28,721	.....	.....
Coal, provincial lands	236,984	163,642	295	189,355	97,349	114,217
Coal, school lands	9,570	3,311	53	6,612	1,504	4,818
Quarrying	1,675	852	.....	1,119	.....	1,408
Quartz mining	182	.....	.....	.....	.....	182
Salt	200	6,721	.....	200	.....	6,721
Bituminous sands	3,952	5,897	.....	6,015	.....	3,834
Miscellaneous	3,560	345	.....	43	22	3,840
TOTALS	2,717,085	3,970,145	29,815	4,746,877	122,701	1,847,467
Dredging (in miles)	145	24	.....	169	.....	.....

DEPARTMENT OF LANDS AND MINES

STATEMENT OF BUSINESS TRANSACTED, 1944-45—PETROLEUM AND NATURAL GAS

	Number	Acres
Leases issued	413	268,813
Leases cancelled and relinquished	481	256,984
Leases reinstated	2	81
Drilling reservations granted	12	102,373
Drilling reservations cancelled and relinquished	20	174,335
Prospecting reservations granted	51	5,058,928
Prospecting reservations cancelled and relinquished	67	4,265,980
Fees, rentals and bonuses collected		\$575,631.65
Royalties collected		588,917.51
TOTAL		\$964,549.16

COAL

	Number	Acres
Leases issued on provincial lands	40	19,329
Leases cancelled and relinquished on provincial lands	16	1,535
Leases reinstated on provincial lands	1	210
Leases issued on school lands	4	180
Leases cancelled and relinquished on school lands	1	40
Domestic permits issued	8	.....
Fees and rentals collected		\$154,498.36
Royalties collected		287,659.07
TOTAL		\$442,157.43

QUARRYING

	Number	Acres
Leases issued	4	33
Leases cancelled and relinquished	4	40
Sand, stone and gravel permits issued	38	.....
Fees and rentals collected		\$ 1,506.71
Royalties collected		7,537.05
TOTAL		\$ 9,043.76

MISCELLANEOUS

	Number
Bituminous sands leases issued .....	.....
Bituminous sands leases cancelled .....	.....
Permits to collect bitumen issued	3
Alkali permits issued .....	.....
Quartz mining claims granted .....	.....
Quartz mining certificates of work issued .....	.....
Powers of Attorney (quartz) filed	2
Placer claims granted	9
Powers of Attorney (placer) filed	2
Bar-digging permits issued .....	.....
Salt leases issued .....	.....
Geophysical licenses issued	18
Fees, rentals and royalties collected, \$33,515.81	

ASSIGNMENTS REGISTERED

Nature	Number
Petroleum and natural gas	250
Coal	5
Quarrying	3
TOTAL	258

PETROLEUM AND NATURAL GAS

Development of Leases.—The regulations provide that approved expenditures incurred in exploratory and development work on petroleum and natural gas rights, acquired under lease or reservation, may be accepted in satisfaction of rentals which otherwise would be payable in cash. During the fiscal year under review, rentals due the Province amounting to \$1,412,458.09 were satisfied from such expenditures. The total revenue received in cash for fees, rentals and bonuses was \$375,631.65 which, added to the expenditures accepted in lieu of rentals, makes a total of \$1,788,089.74.

Disposal by Public Tender.—Bonuses amounting to \$34,585.00 were accepted during the fiscal year at sales by public tender of petroleum and natural gas rights.

Number and Area of Leases.—During the year, 413 petroleum and natural gas leases were issued covering an area of 268,813 acres, and at the close of the fiscal year a total of 3,501 leases were active containing an area of 1,712,447 acres.

Reservations.—Twelve reservations comprising 102,373 acres of petroleum and natural gas rights were granted during the year requiring the drilling of a well. A reservation of this type may not comprise in excess of 10,000 acres and requires the drilling of a well to be commenced within sixty days of the date on which the reservation becomes effective. Fifty-one prospecting reservations were issued under the regulations governing the reservation of petroleum and natural gas rights for geological and/or geophysical examination during the year, covering an area of 5,058,928 acres. At the close of the year five drilling reservations covering 43,915 acres and 49 prospecting reservations were active, containing an area of 4,595,311 acres.

A table is given showing the acreages granted under prospecting permits which were discontinued in 1937, and the acreages granted under prospecting reservations and drilling reservations.

TABLE SHOWING ACREAGE OF PERMITS AND RESERVATIONS GRANTED

Fiscal Years	Prospecting Permits	Prospecting Reservations	Drilling Reservations
1930-31	.....	.....	.....
1931-32	.....	.....	.....
1932-33	29,161	.....	.....
1933-34	.....	.....	.....
1934-35	.....	.....	.....
1935-36	232,738	.....	.....
1936-37	483,171	.....	.....
1937-38	588,437	221,691	.....
1938-39	.....	334,600	.....
1939-40	.....	475,881	.....
1940-41	.....	638,889	.....
1941-42	.....	4,058,116	.....
1942-43	.....	1,103,059	.....
1943-44	.....	3,775,695	61,863
1944-45	.....	3,294,496	248,157
1945-46	.....	5,058,928	102,373

COAL

New coal leases were mainly granted for the continuation of existing operations, and for new mines where the local market could not be economically supplied from operating mines in the vicinity. In the fiscal year, 44 leases were issued containing 19,509 acres, being made up of new and renewal leases. There are now 386 active leases comprising 119,035 acres.

During the current fiscal year the following quantity of coal, subject to Crown royalty, was mined:

	Tons
Provincial lands' leases	3,642,003
School lands' leases	577,306
Coal lands' and mineral sales	1,080,335
TOTAL	5,299,644

Crown royalties collected on coal mined in Alberta since April 1st, 1907, are as follows:

CROWN ROYALTIES COLLECTED ON COAL

Fiscal Year	Royalty Paid	Fiscal Year	Royalty Paid
1907-08	\$ 7,621.67	1920-21	\$ 190,545.80
1908-09	5,322.39	1921-22	185,436.88
1909-10	153,559.98	1922-23	171,723.83
1910-11	218,932.88	1923-24	210,389.53
1911-12	104,894.55	1924-25	148,979.10
1912-13	142,997.79	1925-26	188,277.94
1913-14	147,198.75	1926-27	218,150.10
1914-15	104,489.77	1927-28	231,757.96
1915-16	67,190.17	1928-29	254,616.27
1916-17	149,447.82	1929-30	248,083.71
1917-18	144,634.75	1930-31 (First half)*	90,052.07
1918-19	175,687.66		
1919-20	181,641.80		\$3,741,633.17

	Provincial Lands	School Lands	
1930-31 (Last half)*	\$105,126.51	\$ 5,014.29	110,140.80
1931-32	145,170.33	6,354.09	151,524.42
1932-33	143,800.01	4,971.78	148,771.79
1933-34	193,527.82	9,520.13	203,047.95
1934-35	176,122.43	12,365.39	188,487.82
1935-36	186,691.23	19,779.76	206,470.99
1936-37	175,214.33	18,596.00	193,810.33
1937-38	158,227.11	15,159.15	173,386.26
1938-39	143,070.78	9,270.23	152,341.01
1939-40	168,802.75	7,812.78	176,615.53
1940-41	200,045.68	15,841.24	215,886.92
1941-42	216,777.95	22,849.83	239,627.78
1942-43	235,613.19	24,700.43	260,313.62
1943-44	239,590.96	19,732.99	259,323.95
1944-45	251,136.50	22,094.01	273,230.51
1945-46	260,144.66	27,514.41	287,659.07
TOTAL			\$6,982,271.92

*Date of transfer of Alberta's natural resources from federal to provincial control, and date also of the creation of the Department of Lands and Mines, Alberta, October 1st, 1930.

Permits for Domestic Use.—Permits to mine coal on Provincial lands by strip-mining methods for domestic use may be issued to actual settlers on payment of a fee of one dollar and royalty at the rate of ten cents a ton. Each permit expires on March 31st following its date of issue. During the year, 8 permits were issued authorizing an extraction of 112 tons, none of which could be bartered or sold.

QUARRYING

One quarrying lease was issued on surveyed lands containing an area of 33 acres, three leases were issued during the fiscal year for removing gravel from the bed of the North Saskatchewan River in the vicinity of Edmonton, and one was issued on the bed of the Oldman River near Lethbridge. Extraction of 265,113 cubic yards of sand and gravel and 71,211 cubic yards of limestone and shale from Provincial lands was reported for the calendar year of 1945.

At the close of the fiscal year, 62 leases were active containing an area of 1,408 acres.

Permits.—Sand, stone and gravel permits are issued on the beds of rivers and lakes at a fee of \$2.50 and a royalty of five cents a cubic yard, and expire on the 30th day of November following the date of issue. In this fiscal year, 38 permits were issued for the extraction of 25,665 cubic yards.

QUARTZ

No new claims were recorded during the fiscal year. The claim in the Drumheller district for the recovery of bentonite was continued, and royalty of \$13.72 was paid representing 2½% of the value of the bentonite recovered.

The four quartz leases covering 181.8 acres issued by the Department of the Interior are still active.

PLACER

Nine placer grants were issued during the year, six claims being recorded on the McLeod River in township 55, range 13, west of the 5th meridian, one on the Athabaska River in township 63, range 3, west of the 5th meridian, and two on the North Saskatchewan River near Edmonton.

BITUMINOUS SANDS

The lease in the McMurray area containing 3,834 acres on which Oil Sands Limited carried on experimental and development work at Bitumount is still active, and during the year research by the Province was continued. Abasand Oils Limited continued its development and exploratory work until a fire in June, 1945, destroyed a portion of its plant on the bank of Horse River.

SODIUM CHLORIDE (Common Salt)

This fiscal year the salt plant operated by Industrial Minerals Limited reported extraction of 29,206 tons of salt on which royalty at the rate of twenty cents a ton was collected. This plant is located on the lease issued in 1937 covering 6,720.82 acres.

A summary appears showing the salt production by fiscal years.

SALT PRODUCTION	
Fiscal Years	Tons Produced
1938-39	5,420
1939-40	2,508
1940-41	11,720
1941-42	19,016
1942-43	20,672
1943-44	17,425
1944-45	28,315
1945-46	29,206

SPECIAL PERMITS

The three annual permits for the collection of bitumen issuing from old wells in the Peace River district were again renewed. Collection of 593 gallons was reported during the year under review.

DRILLING STATISTICS

The drilling and production of petroleum and natural gas wells in the Province are administered by The Petroleum and Natural Gas Conservation Board, 514 11th Avenue West, Calgary, Alberta, and particulars as to drilling activity, production and statistical data are included in weekly, monthly and annual reports issued by the Board.

Technical Division

REPORT OF THE SUPERINTENDENT OF TECHNICAL DIVISION, T. W. DALKIN

The past year, 1945, will stand out in history as the year that the might of the Allies overwhelmed the Germans and the Japanese, Italy having been liquidated in November of the previous year. It is with a deep feeling of thankfulness that the sword has been sheathed and the representatives of the Nations of the world are now gathered around the conference table to establish a just peace throughout the world. At this time it is fitting to extend a sincere welcome to our sailors, soldiers and airmen who have returned, and their adjustment and application to their civilian duties are commendable indeed.. It would be an oversight not to extend our gratitude and appreciation to those who refused to desert the Provincial "Ship of State" for more lucrative positions outside the Government service and who "carried on" during the war years when it was impossible to secure even inexperienced assistance.

And so it is with the dawn of peace upon a torn world that the activities of the Technical Division for the fiscal year ending March 31st, 1946, are being reviewed.

Notifications—Lands Patents:

As was to be expected, there was a substantial drop in the area of land patented as homesteads, due to the fact that the homestead policy was discontinued on March 24th, 1939, and a new scheme was inaugurated whereby Agricultural Leases were granted instead. This drop will, of course, continue from year to year until the homesteads are patented or cancelled through non-fulfilment of duties. As the homesteads disappear, then Notifications will gradually appear for those lands granted as Agricultural Leases and for which title may be obtained after certain terms and conditions have been fulfilled.

During this year 1,233 Notifications covering an area of 183,425.587 acres, more or less, have been issued, as compared with 1,663 Notifications covering 296,393.477 acres for the previous year. Complete details of the Notifications issued are as follows, including those issued for lots in Subdivisions:

Classification		Acres
Homesteads	767	118,366.165
Sales (including lots in subdivisions)	126	9,396.786
Second Homesteads	74	11,429.66
Soldier Grants	3	481.00
Special Grants	16	230.79
Revival of Titles	2	480.00
Exchanges of Land	1	155.50
Exchanges of Land (Special Areas)	4	948.28
Certificates of Tax Sales Redemption	5	961.00
School Land Sales	233	40,973.912
C.P.R. Grants	2	1.247
	<hr/> 1,233	<hr/> 183,424.34

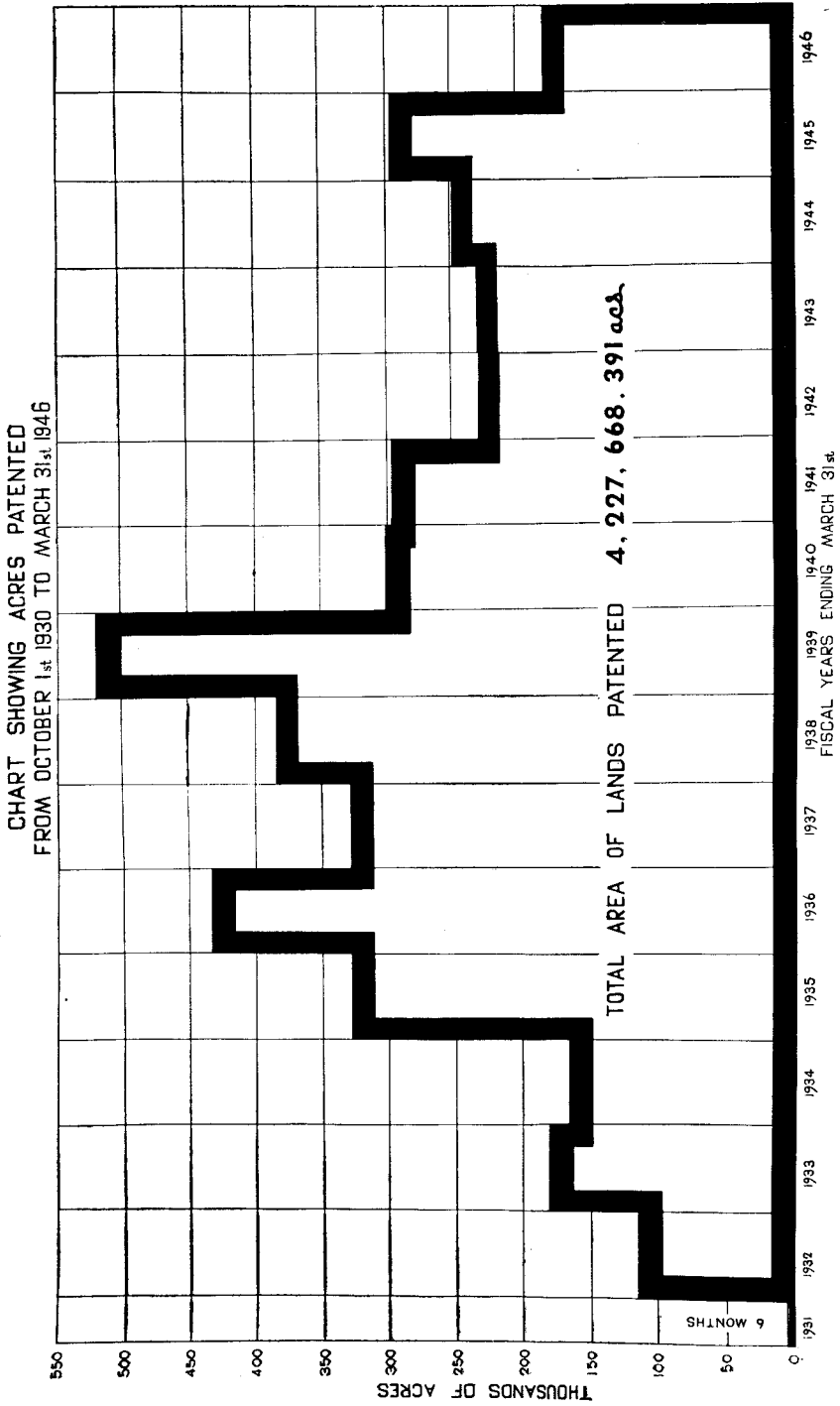
DETAILS OF SALES IN SUBDIVISIONS WHICH ARE INCLUDED IN THE
126 NOTIFICATIONS REFERRED TO ABOVE

Notifications	Area (Acres)	Notifications	No. of Lots	No. of Blacks
Bashaw, Plan 2627 A.C.		1	9	....
Canmore, Plan 39 Gen.		1	1	....
Chinook, Plan 2231 B.A.		1	1	....
Coleman, Plan 113 Gen.		2	4	....
Compeer, Plan 1335 B.A.		3	4	....
Donnelly, Plan 204 C.L.		1	2	....
Enchant, Plan 438 B.D.		2	5	....
Flying Shot Lake Settlement		1	1	....
Hanna, Plan 3931 E.X.		3	Pt. Blk. 4	4
Heart River Salt Prairie Settlement		1	1	....
Jarvie, Plan 37 Gen.		8	12	....
Lac La Biche, Plan 121 Gen.		1	2	....
Milk River, Plan 2227 Y.		1	1	....
Oyen, Plan 4490 A.R.		1	1	....
Oyen, Swenson, Plan 3732 C.D.		2	4	....
Peace River Landing Settlement, Plan 5617 B.K.		1	6	....
Raymond, Plan 181 Gen.		1	2	....
Retlaw, Plan 7285 A.Q.		1	2	....
Rosemary, Plan 60 Gen.		1	1	....
Scapa, Plan 8731 D.L.		1	1	....
Skiff, Plan 8569		1	2	....
Sunnynook, Plan 4045 C.O.		2	3	....
Travers, Plan 927 A.Y.		1	1	....
Walsh, Plan 3644 B.		2	16	....
Waiparous, Plan 3046		5	7	....
		57	106	4

SCHOOL LANDS INCLUDED IN THE 233 NOTIFICATIONS REFERRED TO ABOVE

	Notifications	No. of Lots	No. of Blacks
McLennan, Plan 1394 E.O.	11	16	....
Venice, Plan 6036 E.T.	1	1	....
	12	17	....

Since the return of the Natural Resources the Province has patented 4,277,668.391 acres, more or less, but on the other hand the Province has acquired title to 2,473,090.79 acres, more or less, of land located inside the Special Areas, and 1,161,066.45 acres of land outside the Special Areas, details of which appear as follows and from which it can be deducted that the Province has patented just over 600,000 acres of land more than the Province has received from revested and tax recovery lands:



TAX RECOVERY AND REVESTED LANDS
(INSIDE SPECIAL AREAS)

	As on March 31, 1945	From April 1, 1945, to Mar. 31, 1946	Total to Mar. 31, 1946
	Acres	Acres	Acres
Tax Recovery	2,237,932.36	64,933.93	2,302,866.29
Revested	75,139.60	95,084.90	170,224.50
Total	2,313,071.96	160,018.83	2,473,090.79

(OUTSIDE SPECIAL AREAS)

Tax Recovery	723,998.40	311.70	724,310.10
Revested	433,387.73	3,358.62	436,746.35
Total	1,157,386.13	3,670.32	1,161,056.45

With reference to the minerals, the following areas have been revested but figures do not include mineral rights that have been voluntarily transferred to the Crown under The Mineral Taxation Act. Particulars in this regard appear towards the end of this report:

MINERALS ONLY

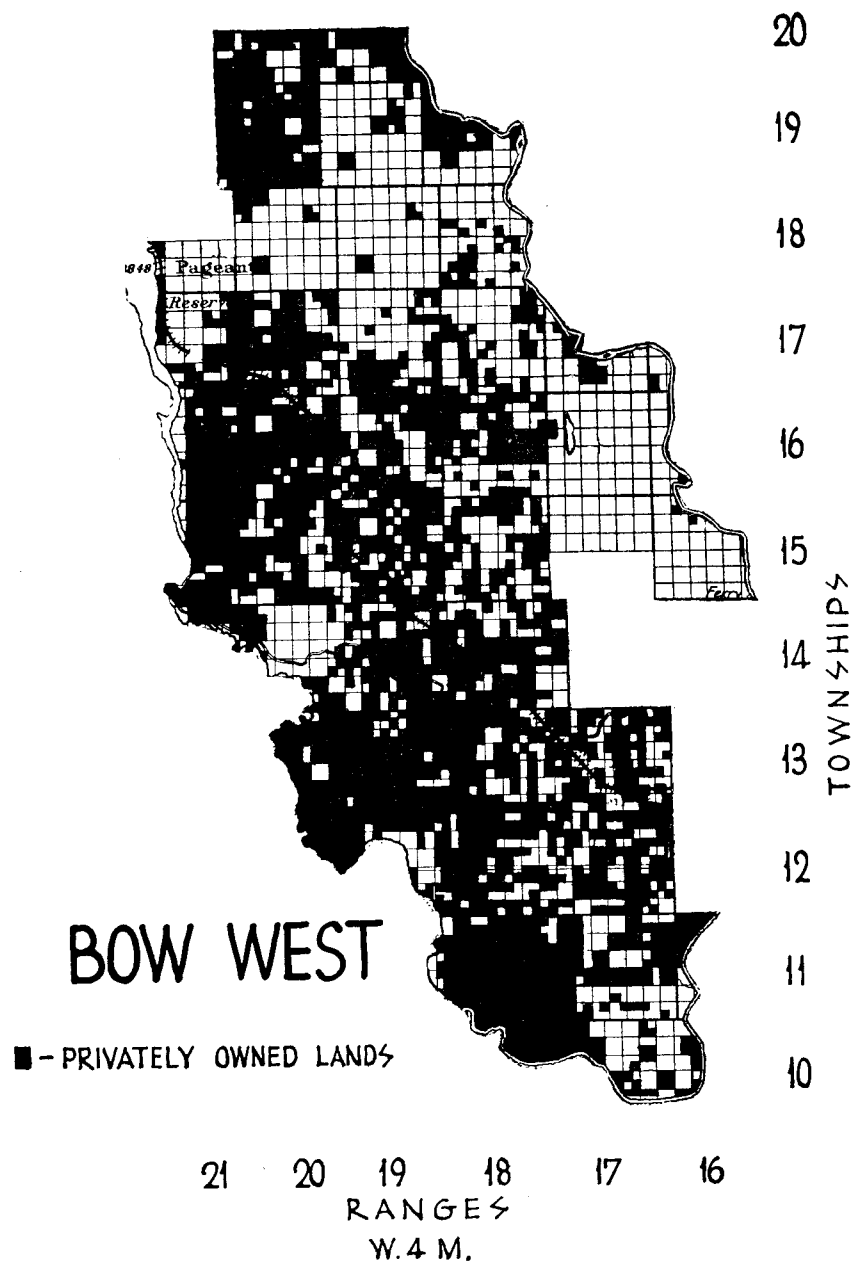
	Acres
As on March 31, 1945	47,662.77
From April 1, 1945, to March 31, 1946	4,981.97
Total to March 31, 1946	52,644.74

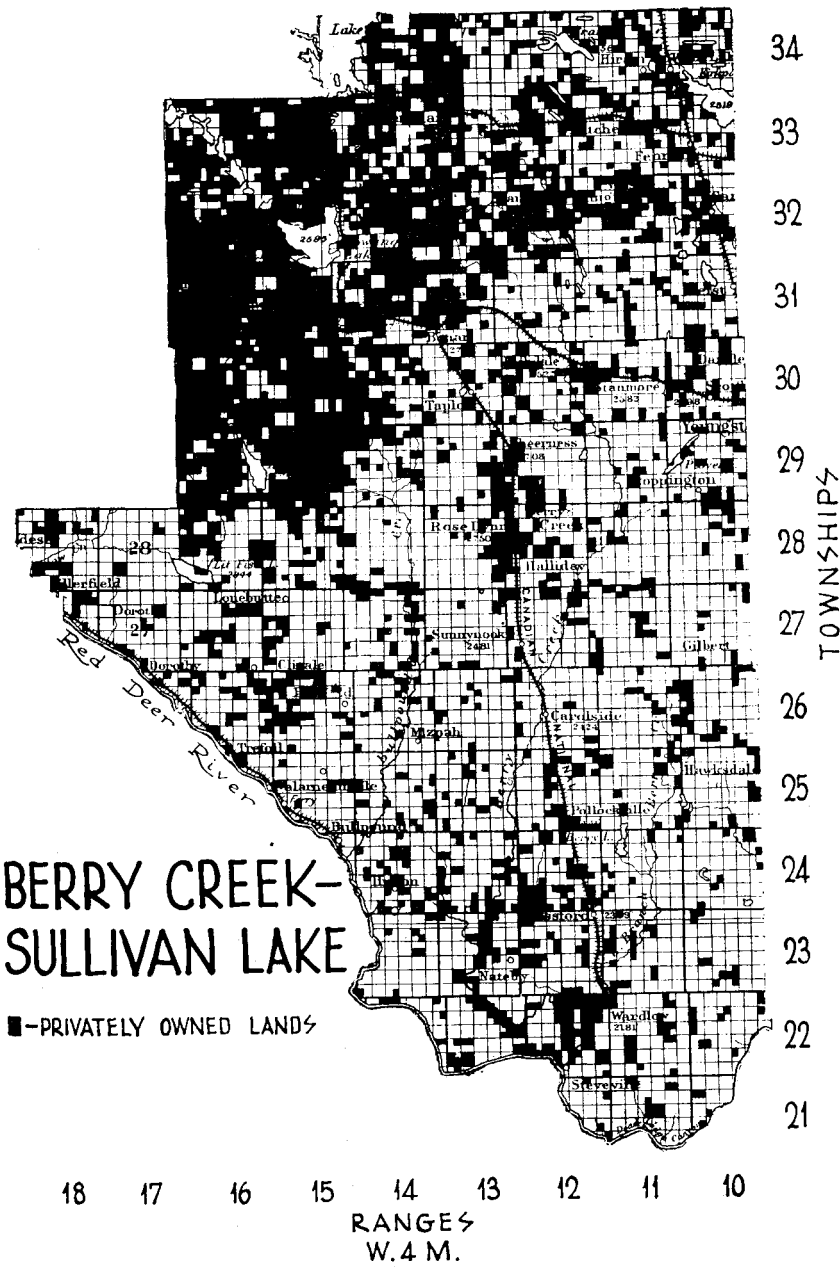
SPECIAL AREAS

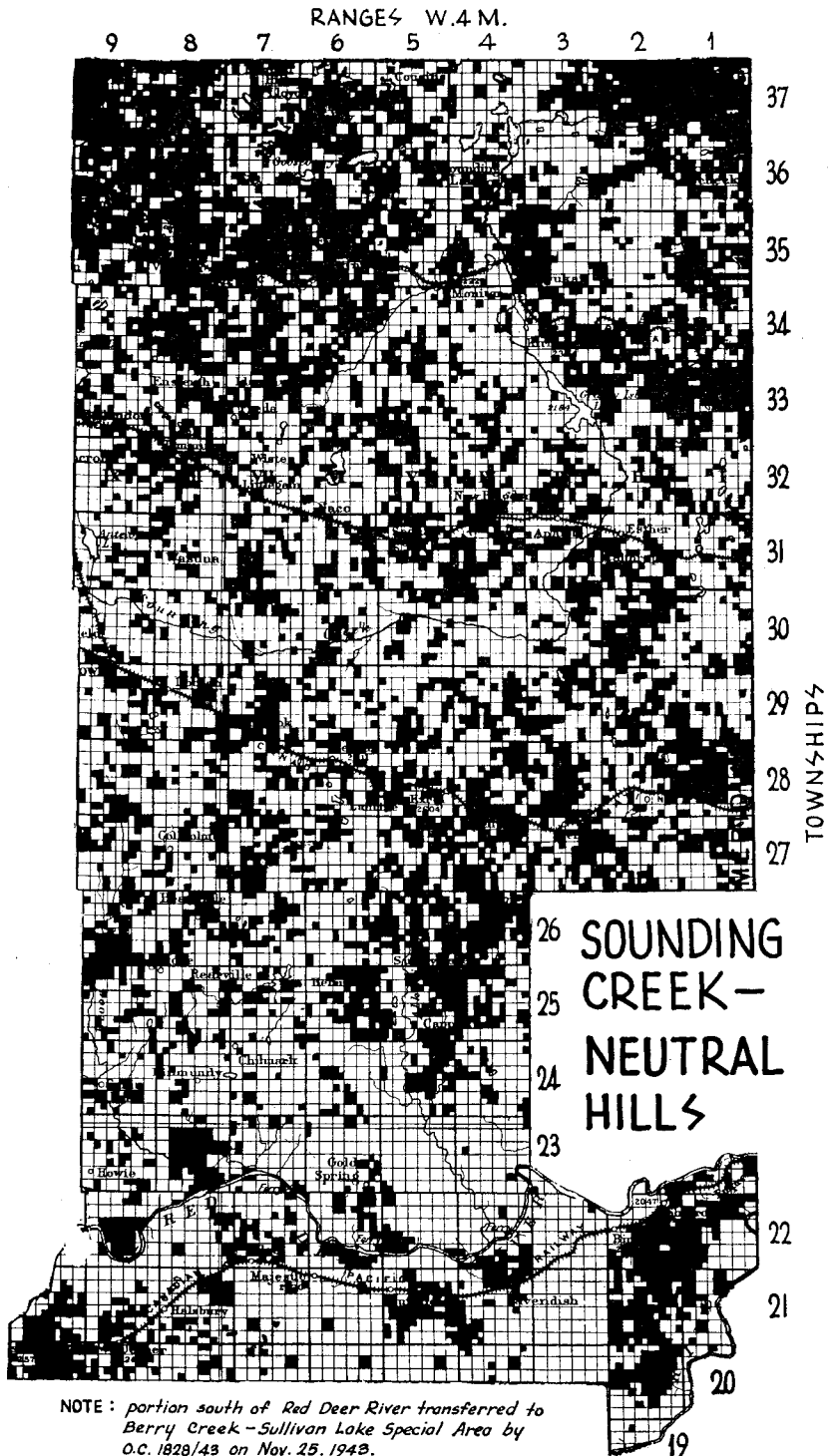
Plans are herewith submitted showing a clear picture of the freehold lands and those under the administration of this Department by virtue of the fact that they are unpatented lands or lands to which the Crown has secured title by tax recovery or revestment.

EXCHANGE OF LANDS

Applications still continue to be made to exchange freehold lands for Crown lands, particulars of which appear as follows:







EXCHANGES COMPLETED—NOTIFICATION ISSUED DURING FISCAL YEAR

File	Name	Land to Crown	Land to Applicant	Order-in-Council	Notification
379	Credit Foncier, Franco Canadienne The Holland Canada Mortgage Co. Ltd. The Administration and Trust Company	110,408.38 acres	55,197.60 acres	O/C 1267/44 O/C 1434/45	2/ 3/45 2/ 3/45 22/ 2/45 22/ 5/45 2/ 8/45 5/ 9/45 30/10/45 26/ 6/45
2-163	John W. Airey	SE 23-32- 3-W. 4th M.	NE 9-32- 3-W. 4th M.	O/C 1830/43, 25/11/43	
2-167	R. W. Mawdsley	SW 22-26- 7-W. 4th M.	SE 2-29- 7-W. 4th M.	O/C 1683/44, 3/11/44	
2-140	Gust Stretting	S½ 9-18-18-W. 4th M.	S½ 20-14-17-W. 4th M.	O/C 1375/44, 5/ 9/44	
2-146	Erik Stretting	N½ 9-18-18-W. 4th M.	S½ 26-14-17-W. 4th M.	O/C 1374/44, 5/ 9/44	
4289 S.L.	West Canadian Collieries Ltd.	NE 29- 7- 3-W. 5th M.	NE 29- 7- 3-W. 5th M.	O/C 1019/43, 29/ 6/43	

EXCHANGES COMPLETED—NOTIFICATION TO ISSUE WHEN APPLICANTS COMPLY WITH RESIDENCE CLAUSE

File	Name	Land to Crown	Land to Applicant	Order-in-Council	Notification
2-207	John D. Cody	NW 16-30- 5-W. 4th M.	W½ 16-29- 6-W. 4th M.	O/C 25/45, 2/ 1/46	2/ 1/47
2-194	Henry R. King	NE 17-30- 5-W. 4th M. E½ 17-25- 8-W. 4th M. S½ 20-25- 8-W. 4th M.	All 13-28- 8-W. 4th M.	O/C 532/45, 12/ 4/45	24/10/46
2-201	R. A. Johnston	NE 25-25- 6-W. 4th M.	SW 22-25- 6-W. 4th M.	O/C 533/45, 12/ 4/45	5/ 7/46
2-205	Otto Patzer	SW 21-32-12-W. 4th M.	NE 16-33-12-W. 4th M.	O/C 534/45, 12/ 4/45	5/ 8/46
2-206	Geo. A. Vert	SE 19-33- 2-W. 4th M.	SW 23-34- 3-W. 4th M.	O/C 1805/45, 15/11/45	20/ 2/47
2-211	E. Hames	NE 27-21- 4-W. 4th M.	NW 26-21- 4-W. 4th M.	O/C 1665/45, 9/10/45	28/12/46
2-212	J. C. Bennett	South of Railway W½ 30-11-17-W. 4th M.	North of Railway E½ 14-11-17-W. 4th M.	O/C 1807/45, 15/11/35	23/ 2/47
2-213	Mrs. A. Egeland	SW 32-17-18-W. 4th M.	SE 32-14-18-W. 4th M.	O/C 1810/45, 15/11/45	1/ 3/47
2-215	M. H. Paetz	All 2-26- 9-W. 4th M.	All 20-29- 9-W. 4th M.	O/C 1678/45, 12/10/45	4/ 2/47
2-216	R. H. Meade	NW 11-28- 3-W. 4th M.	SE 28-27- 3-W. 4th M.	O/C 1679/45, 12/10/45	5/ 3/47
2-200	H. L. Patterson	NW 34-28- 2-W. 4th M. NE 26-29- 2-W. 4th M.	W½ 8-29- 1-W. 4th M.	O/C 118/45, 24/ 1/45	9/ 5/46
2-219	C. H. Carrington	E½ 8-17-18-W. 4th M.	E½ 23-17-19-W. 4th M.	O/C 1666/45, 9/10/45	1/ 3/47
2-228	Mrs. W. H. Quain	SW 19-26- 4-W. 4th M.	SE 15-26- 5-W. 4th M.	O/C 21/46, 2/ 1/46	18/ 3/47
2-220	P. F. Wright	N½ 7-30- 4-W. 4th M.	NW 13-30- 5-W. 4th M.	O/C 1693/45, 18/10/45	18/ 3/47
2-225	Mrs. A. E. Clyne	S½ 23-27-15-W. 4th M.	N½ 25-28-15-W. 4th M.	O/C 194/45, 18/10/45	17/12/46

It will be noticed that five exchanges have been completed, but many others have been approved by Order in Council. With reference to the uncompleted exchanges, the Crown has acquired title to the applicants' lands, but Notifications cannot issue to the applicants for the Crown lands until at least one year's residence has been completed. It was found expedient to establish a one year's residential clause on such exchanges in order to protect the Crown from applicants whose sole purpose was to exchange lands for immediate re-sale rather than to make a home and establish an economic unit.

It is with a certain measure of satisfaction that "finis" can be written to the exchange of lands between the Credit Foncier Franco-Canadienne, the Holland-Canada Mortgage Ltd., the Administration and Trust Company, and the Crown. Negotiations were started about three years ago and authority was given by O.C. 1267/44 on the 15th August, 1944. As will be known, the Crown acquired title to 110,408.38 acres of these Companies' lands in exchange for half the amount of Crown lands. The Companies' lands were scattered throughout the Special Areas and were often surrounded by Crown lands. In acquiring these isolated areas among the Crown lands it greatly facilitated and simplified the administration of the Special Areas, which was one of the objects of this exchange.

ROADWAYS

The Director of Surveys of the Department of Public Works forwarded tracings of the surveys of forty-six highways and roadways which affected 170 parcels of Crown land under the administration of this Department. Following the general policy, all such areas required for these roadways were granted free of charge, except in cases where the lands had been alienated, as in the case of School Lands under Agreement for Sale. In such cases the areas required for these roadways were purchased and the purchaser compensated accordingly.

A new policy has now been promulgated by the Department in conjunction with the Department of Public Works when dealing with abandoned roadways and which roadways were excepted from the original patent from the Crown. Formerly when such roadways were abandoned the areas within such roadways became, upon cancellation, the property of the Crown, and then a supplementary grant was granted to the owner of the land traversed by the roadway, provided the owner was the original patentee. In cases where the owner is not the original patentee, then the present owner was given the option of buying the area comprised within the limits of the abandoned roadway. This has not proved to be a very satisfactory procedure, as in many cases the registration and notification fees exceeded the value of the abandoned roadway which naturally could not be regarded as desirable farm land. Consequently, many of these abandoned roadway areas remained Crown land.

The new policy inaugurated now gives the necessary authorization to the Department of Public Works to issue notifications for abandoned road areas direct to the present owners of the land adjoining the cancelled roads, without further expense to the owners. This has the effect of placing the area on the tax roll. There are, however, some cases where one roadway is cancelled for a more favourable location through the same quarter section, and the cancelled roadway is still used as a basis of compensation for the area taken for the new roadway. The Director of Surveys informs this Division of the details of all notifications issued for these abandoned roadways and the necessary entries are made in our departmental records.

The increased activity in the lumber industry was again reflected in the applications for logging roads. Plans were prepared and License of Occupation issued as follows:

License No.	Name	Term	Project	Land
153	Chisholm Saw Mills ...	Pleasure	Logging Road	Twp. 72-6-W. 5th Mer.
155	Swanson Lumber Co....	Pleasure	Logging Road	Twps. 53 and 54-19-W. 5th Mer.
156	Atlas Lumber Co.	Pleasure	Logging Road	Twp. 43-8-W. 5th Mer.
157	Hales H. Ross & Sons Ltd.	Pleasure	Logging Road	Twp. 71-26-W. 5th Mer. and Twp. 71-25-W. 5th Mer.
158	A. W. O'Brien	Pleasure	Logging Road	Twps. 63 and 64-6-W. 5th Mer.
159	Swanson Lumber Co....	Pleasure	Logging Road	Twps. 50-11-W. 5th and 48, 49 and 50-12-W. 5th Mer.
160	Swanson Lumber Co....	Pleasure	Logging Road	Twps. 52 and 53-11-W. 5th Mer.
161	Swanson Lumber Co....	Pleasure	Logging Road	Twps. 56 and 57-12-W. 5th Mer.
163	Chisholm Saw Mills ...	Pleasure	Logging Road	Twp. 72-5-W. 5th Mer.
165	Chas. E. Luker & G. A. Coke	Pleasure	Logging Road	Twps. 72 and 79, Rgs. 21, 22 and 23-W. 4th Mer.

Other plans were examined and recorded and License of Occupation issued for the following:

License No.	Name	Term	Project	Land
154	D. Schmidt	As required	Irrigation Scheme	Twp. 14-5-W. 4th Mer.
162	Madison Natural Gas Co.	Pleasure	Pipe Line	Twp. 20-2-W. 5th Mer.
164	Canadian Northern Railway Co.	Pleasure	Spur Track	Twp. 39-10-W. 5th Mer.
82 S.L.	R. J. Walsh	25 years	Irrigation Ditch	Twp. 7-7-W. 4th Mer.
84 S.L.	Canada Land and Irrigation Co.	25 years	Irrigation Ditch	Sec. 11, 13-16-W. 4th Mer.
85 S.L.	Canada Land and Irrigation Co.	25 years	Irrigation Ditch	Sec. 29, 14-17-W. 4th Mer.

RIGHTS OF ENTRY

Towards the fall of 1945 and the beginning of 1946 there was decided activity created by applications from the major oil companies for Rights of Entry upon Crown lands under the regulations established by Order in Council dated the 19th day of May, 1942, and numbered 689/42. About thirty-five plans of survey were submitted with the applications, and these have been examined and recorded in this Division.

NEW SURVEYS

From time to time applications still continue to be received from settlers and squatters, requesting surveys of unsurveyed Crown land. Many of these applications, however, cannot be considered, due to the fact that the land is not considered suitable for settlement and in some case inaccessible. There are still, however, many applications that require attention, but the Department is confronted with the problem of obtaining qualified Alberta Land Surveyors, all of whom appear to be reaping the benefits of the post-war boom. It just about seems impossible to induce surveyors to go to the outlying areas when more remunerative work can be readily obtained in urban and nearby rural areas close to home.

Eventually, however, a survey party was formed and induced to proceed to townships 77, range 1, west of the 6th meridian, 78, range 1, west of the 6th meridian, and 78, range 2, west of the 6th meridian, in the Peace River area, with the object of surveying more suitable lands for returned men. After many delays, the party proceeded into the field in September, and when the party did arrive more difficulties were encountered in keeping it there, due to food rationing and weather conditions. Snow began to fall and this seemed to be the deciding factor to close up the survey, and the party arrived back in Edmonton about the middle of November. This was indeed a very disappointing season, and the schedule that had been mapped out fell a long way short of completion. The result of this survey was that sufficient lines were run and plans will be prepared so that about 140 quarter sections will be available for settlement.

Beaver Hill Lake:

For many years the waters of Beaver Hill Lake, south-east of Edmonton and just north of Tofield, have been receding, and many applications have been received from the settlers adjoining to purchase or lease the lands. In order to properly administer this large accrued area it is essential that it be surveyed without further delay, and a request has gone forward to the Director of Surveys of the Department of Public Works to enter this work upon his programme for the forthcoming year.

Buck Lake:

Due to repeated requests from squatters, an inspection was made of the south-west quarter of section 11, township 46, range 6, west of the 5th meridian, which is located just south of Minnehik on the shore of Buck Lake, and which lake is about twenty-five miles west of Pigeon Lake. About twenty-three settlers signed the petition to have the land subdivided into lots. The inspection revealed that it would be advantageous to have this subdivision survey made, and if at all possible it will be executed in the coming year.

Other areas have also been listed for survey for some considerable time but, as already mentioned, due to the lack of the services of a surveyor it is indefinite when such areas may receive attention.

Following up the surveys that have been previously executed, 200 lithographed copies of a plan of township 73, range 4, west of the 6th meridian, have now been received.

From time to time errors are discovered in established plans of survey which have been approved by the Surveyor General, and upon submitting such errors to Ottawa, new township plans are then lithographed. At the present time the Department is awaiting new Township Plans of Survey for land in township 14, range 1, west of the 5th meridian, and township 34, range 6, west of the 5th meridian.

NEW MAPS

The Department is still somewhat embarrassed through the lack of certain maps, particularly the eight mile map and the sixteen mile map of the Province. Every effort, however, is being put forth in order to obtain new publications.

Only three new small publications were obtained this year:

1. Base map of the Province, 20 miles to the inch.
2. Municipal District and Improvement District Map showing new boundaries which in all cases considerably enlarged the districts.
3. Special Areas Map showing the revised boundaries.

It was possible to produce all these maps in the Province, and it should be added that the New Municipal District Map was produced in conjunction with the Department of Municipal Affairs, and this publication to a certain measure was of great assistance to the Department of Municipal Affairs, which Department had been unable to obtain a larger publication showing the revised areas of the Municipalities and Improvement Districts.

DOMINION GOVERNMENT PUBLICATIONS

Continued close co-operation was maintained in various branches with the Department of Mines and Resources at Ottawa which, of course, included the transfer of certain lands to the jurisdiction of the Province, and also the checking of the proofs of certain publications issued by the Dominion Government. These publications included the following: Fort Vermilion Sheet, 84 N.E.; Whitecourt-Athabaska, 83 N.E.; Notikewin Sectional Map, 563; Wabiskaw River Sheet, 84 S.E.; Lac La Biche-Peter Pond, 73 N.W.

AERIAL PHOTOGRAPHS

Submitted with this report is a map of the Province showing the extent of Aerial Surveys. These Aerial Surveys are classified into vertical, oblique and trimetrogon.

The trimetrogon method covers a greater area of photography in one flight, due to the fact that there are three cameras photographing the area, one of which is vertical and the other two oblique, attached to each side of the vertical camera. The area photographed by the trimetrogon system was done by the United States of America Army Air Force as a war measure, and eventually copies of these photographs were released by permission of Washington and Ottawa and filed in this Division.

By referring to the map it will be noticed that there are still vast areas to be photographed, preferably under the vertical system, from which maps can be more readily drafted.

Due to the fact that the Dominion Government is well supplied with equipment and can utilize the services of the Royal Canadian Air Force, it was deemed advisable to enter into negotiations with the senior Government to take care of our Aerial Survey Programme for next year, and as can be seen by the map the areas to be surveyed for 1946 are shown in a cross hatch on the accompanying map.

VETERANS' SETTLEMENT

The past year seems to have been noteworthy in the ever-increasing number of people in search of the resources, and a significant fact was the interest shown by returned men, to whom all possible assistance was given in the way of supplying maps and details of soil classifications. Plans were made available, and a genuine effort was made by the staff to give explicit and useful information. The results of these enquiries are certainly evident, due to the big increase in the number of legal descriptions prepared, which are necessary in the administration of all branches of the resources.

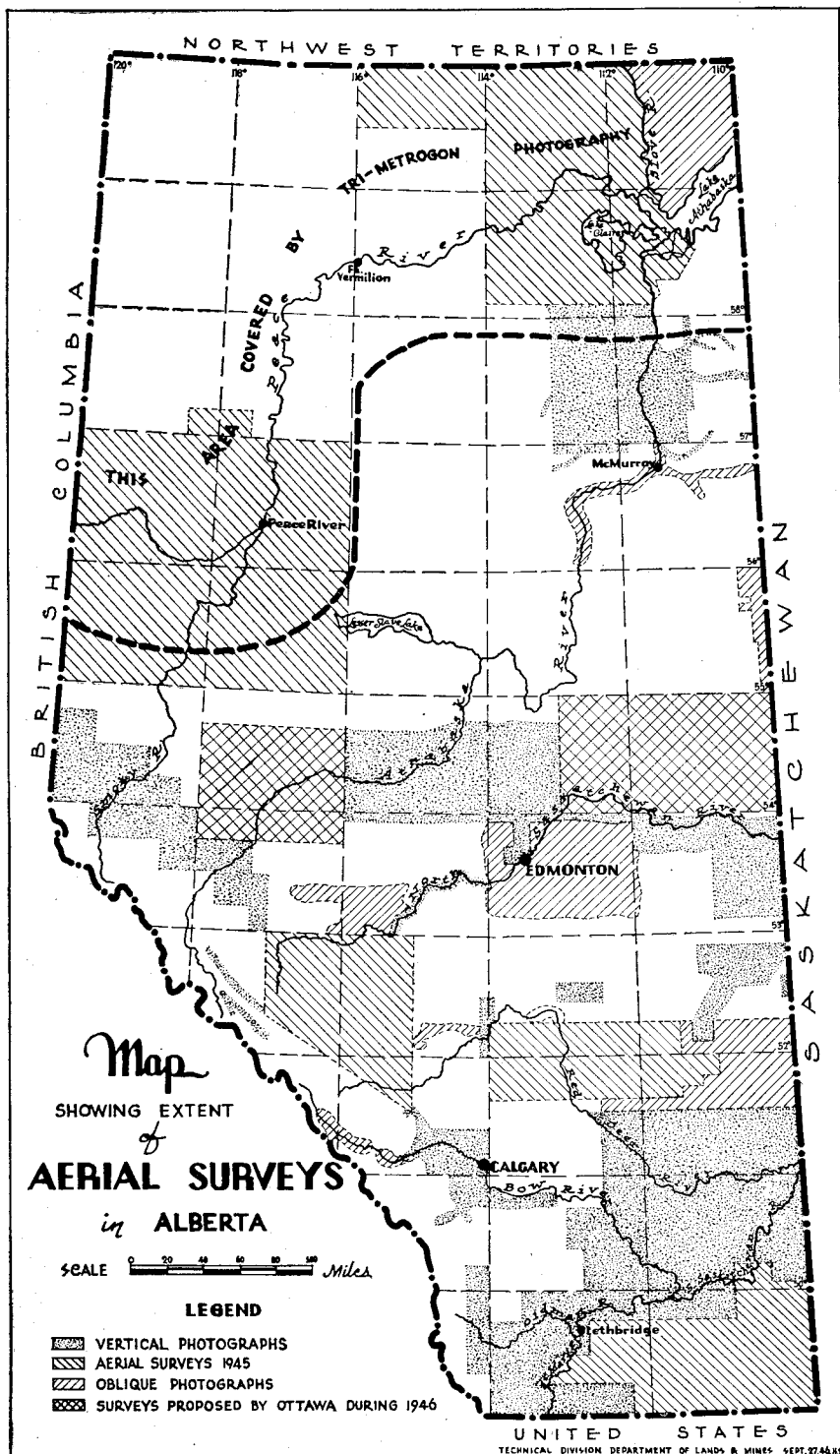
GENERAL DRAFTING

There was a decided increase in the number of plans and sketches that were prepared by the draftsmen, which no doubt was attributable to the increased activity through all divisions of the Department. Such plans and sketches affected mineral rights as well as surface, and particular reference should here be made to the complete set of plans covering various townships in Medicine Hat and vicinity. A schedule was prepared to cover these plans, showing particularly the areas of patented gas rights and Crown gas rights. In addition, the plans show the present registered owners of the minerals.

The photostat machine, as usual, played no small part in copying and enlarging various types of plans that would have entailed the time of many draftsmen. In addition to such work, a large volume of other work was put through the photostat machine, not only for the Department of Lands and Mines, but for other Departments throughout the Government. As an instance, in our own Department, applicants for Veterans' Agricultural Leases, etc., must produce discharge certificates. These certificates are photostated while the applicant waits and the original returned to him, the photostated copy being placed upon the file as a permanent record.

MAP MOUNTING

In addition to the usual map mounting, 216 copies of the Coal Mines Regulations, measuring 4'2" square, and 211 copies of The Coal Mines Regulation Act, measuring 4'2" by 3'1", were mounted on cotton cloth. In accordance with Chapter 8, 1945, Section 78, Sub-section (b) of The Coal Mines Regulation



Act, a copy of each was sent to the owner, agent or manager of every operating mine in the Province, so that the Act and Regulations could be posted in a conspicuous and convenient place at the mine.

DUPLICATING MACHINE

From April 1st, 1945, to March 31, 1946, 706 stencils were cut and 196,072 copies run off for the various branches of the Department.

MINERAL TAXATION

During the administration of The Mineral Taxation Act, 1941, from the year 1941 to the 28th of March, 1945, it transpired that many amendments were desirable and necessary, with the result that on the 28th of March, 1945, The Mineral Taxation Act, 1945, was assented to. This new Act gave the Department of Lands and Mines authority to assess all minerals, including coal, which was previously assessed and taxed by the Department of Municipal Affairs, Municipalities and also School Districts. Due to the loss of revenue sustained by these taxing authorities the Department of Lands and Mines agreed to compensate them for such loss based upon the amount of taxes received during the year 1944.

Under the 1941 Act the assessment of minerals, other than coal, was made by the assessor of the Petroleum and Natural Gas Conservation Board, but the 1945 Act designated this authority to the Department of Lands and Mines. In accordance with the provisions of the Act, an assessor and two assistants were duly appointed to carry out the assessment. In order to commence upon these duties, considerable work was done in obtaining records relating to coal mines, which included production figures, plans of mine workings and, of course, the ownerships of the coal areas.

The Mineral Taxation Act, 1945, made provision for the Minister to declare certain areas as producing areas, with the result that eight producing areas were established, which are as follows: Turner Valley, Kinsella, Viking, Vermilion, Medicine Hat-Redcliff, Crowsnest-Pincher, Lethbridge, Cascade—the last three areas being potential coal areas and the others petroleum and natural gas.

In addition to these producing areas, the Act provides for the assessment and taxation of any quarter section of land, any river lot or any parcel described by metes and bounds which, or any portion of which, is situate within five-eighths of a mile of any quarry, mile, or well from which any minerals are being produced or have at any time been produced.

In making the 1945 assessment, petroleum and natural gas rights were assessed within five-eighths of a mile of all producing wells, provided that such wells were located inside the boundaries of producing areas.

Time would not permit to assess the petroleum and natural gas wells located outside the boundaries of producing areas, but as time goes on all such wells, and any areas within five-eighths of a mile of these wells, will be assessed and taxed.

Time also would not permit the assessment of minerals which, in addition to its ordinary meaning, includes mineral rights and each of the following when mined for commercial purposes: Limestone, granite, slate, marble, clay, gypsum or any building stone, volcanic ash, marl, gravel and sand, nor the assessment of abandoned quarries, mines or wells, from which minerals had been produced.

In making assessments of the gas wells in the Medicine Hat-Redcliff producing area a certain amount of difficulty was encountered in ascertaining the exact location thereof.

A large percentage of the 1945 assessments in the producing areas were appealed by the various owners, chiefly on the grounds of excessive valuation,

with the result that a compromise settlement was made. Due, however, to the delay caused by these appeals the 1945 tax notices on the compromise assessments could not be mailed out till after the close of this fiscal year, and the returns from these taxes will not appear until the forthcoming year.

The returns, however, on the acreage tax are available, and the records show that taxes amounting to \$160,126.13 were received, the tax rate being $1\frac{1}{2}$ c per acre as compared with 1c per acre for the previous year. Of the \$160,126.13 only \$71.80 is for a producing area tax and represents arrears for the year 1944. The tax statement for 1945 appears as follows:

Acreage tax, 1945	\$160,054.33
Producing area tax, 1944—arrears	71.80
	<hr/>
	\$160,126.13

Comparison may be made with the 1944 taxes which are as follows:

Acreage tax, 1944	\$ 61,527.44
Producing area tax	31,255.85
	<hr/>
	\$ 92,783.29

Provision is made in The Mineral Taxation Act, 1945, for our Deputy Minister to send by registered mail a notice to the owners whose taxes with respect to minerals in producing areas or in non-producing areas are one full year in arrears. Such notice advises the owner that unless all taxes and penalties due and owing at the time of payment with respect to the minerals are paid within one year from the date of mailing of the notice, his Certificate of Title will be cancelled and title vested in His Majesty. Some progress has been made in this regard, and a number of notices have been sent out by registered mail, but this work will be somewhat limited until more staff can be employed, as the efforts of the present small staff are more or less confined to the other work entailed in the administration of the Act.

Under section 25 of The Mineral Taxation Act any owner whose title to minerals is free and clear of encumbrances may, with the consent of the Minister first had and obtained, transfer to His Majesty the minerals, and upon the issue by the Registrar of a Certificate of Title in the name of His Majesty, the taxes and penalties outstanding against the minerals under the provisions of this Act and of The Mineral Taxation Act, being chapter 50 of the Revised Statutes of Alberta, 1942, shall be cancelled and the former owner shall be relieved from the payment thereof.

The Urban Mining Operations Act was amended and such amendment assented to on the 27th of March, 1946, whereby the word "mining" was restricted to coal mining, thereby allowing assessment and taxation of any other minerals being mined in urban areas.

On the 27th March, 1946, an amendment to The Mineral Taxation Act, 1945, was assented to, whereby authority was granted to vary the tax rates with respect to the different minerals in any producing area.

In August, 1945, owners began to take advantage of section 25 of The Mineral Taxation Act in order to be relieved from the payment of mineral taxes and arrears through the transfer of such minerals free and clear of all encumbrances, to the Crown.

At the close of this fiscal year, minerals of various descriptions underlying 5,409.81 acres of land were voluntarily transferred to the Crown.

UNEARNED INCREMENT TAX

In these days when practically everything is taxed, it was quite expected that any other conceivable form of taxation would be unpopular. However, after serious consideration it was decided that there was every justification to levy a

tax on unearned increment on all Crown resources that were being assigned in this Department. This necessitated an amendment to The Provincial Lands Act, and accordingly a new section—Section 86(a)—was added, authorizing a tax of 10% on all assignments tendered to the Department for registration, which showed an increase in value over and above the value shown in the last registered assignment, or in the case of a first assignment, on the increase in value over and above the yearly rental and bonus. This amendment came into force on the 6th day of April, 1945, and all assignments dated after that date were subject to taxation. Exception, however, was made on assignments dated previous to the 6th of April, 1945, provided that affidavits were filed verifying the dates of the assignments which must be presented for registration not later than the 30th of June.

During the first few months of the application of this tax there were strong protests from certain quarters, but with the exercise of tact and patience this tax is now generally accepted with good grace, which tax is similar to the Unearned Increment Tax payable through the Land Titles Office on the increasing values on freehold properties. It was always a sound argument to point out that if the unearned increment tax was payable on private property there was certainly some justification that a similar tax should be applied on profits made through assignments of the resources of the people.

There are, of course, many difficulties in arriving at the value of the true consideration which may take the form of cash, other goods, or both, and in some cases royalties or the acceptance of shares, etc.

In connection with the improvements on ranch lands, a great deal of time must be spent going through rather voluminous Ottawa files in order to ascertain the real owner of the buildings listed in improvements. In some cases it has been discovered that through the passage of time the assignors of ranches honestly feel that they own the buildings, and it comes as somewhat of a surprise when it is established through our records that the buildings and improvements are the property of the Crown. On most of the first assignments, particularly ranch lands, a great amount of research through files is necessary, but after a value and the true ownership of improvements have been established on the first assignment, then subsequent assignments can be more expeditiously dealt with.

ASSIGNMENTS REGISTERED

Mining Leases	258
Provincial Lands	218
School Lands	137
Total.....	<u>613</u>

Under the heading of Provincial Lands and School Lands are included Timber Berths and Permits and Miscellaneous Leases.

The revenue derived from Unearned Increment Tax was \$4,333.56, of which amount \$241.13 was derived from assignments within the limits of the Special Areas.

Accounting Division

REPORT OF THE ACCOUNTANT, I. N. MCKINNON

A surplus of \$2,302,915.07 on income account was shown for the fiscal year ending March 31st, 1946, as compared with \$2,442,790.39 for the previous year, a decrease of \$139,875.32.

Net revenue amounted to \$3,403,473.33, a decrease of \$81,156.98. Main increases and decreases were as follows:

	Increases	Decrease
FISHERIES BRANCH:		
Miscellaneous	\$ 8,054.58	
GAME BRANCH:		
Game Licenses	21,397.25	
Miscellaneous	19,097.53	
LANDS AND GRAZING BRANCH:		
Grazing Rentals, Fees, etc.	73,157.93	
Miscellaneous		\$ 7,031.76
TIMBER BRANCH:		
Timber Rentals, Fees, Dues, etc.	158,796.79	
Miscellaneous	917.45	
MINING LANDS BRANCH:		
Miscellaneous Rentals, Fees, etc.	14,932.33	
Coal Rentals, Fees, etc.	36,605.81	
Petroleum and Natural Gas Fees, Rentals, etc.		245,751.13
Petroleum and Natural Gas Royalty		118,889.60
Sundry items	9,890.19	
MINERAL TAX ACT	67,342.84	
UNEARNED INCREMENT TAX	4,848.43	
SCHOOL LANDS BRANCH:		
Interest on Sales		45,737.29
Cultivation Rentals, Fees, etc.		46,779.75
P. & N.G. Fees, Rentals, etc.		39,697.58
Miscellaneous	11,952.79	
MISCELLANEOUS		4,263.79
NET REVENUE DECREASE	81,156.98	
	\$508,150.90	\$508,150.90

Expenditure on income account for the year amounted to \$1,100,558.26, an increase of \$58,718.34. Salaries showed an increase of \$45,273.32, and bounties paid for destruction of pests increased by \$22,057.20. A decrease was shown on fire fighting costs of \$21,610.66. Particulars of expenditure will be found in Statement "D".

Gross receipts from all sources amounted to \$5,316,087.01 as against \$5,329,173.91 for 1944-45.

The period under review saw the end of World War II and also marked the first decrease in net revenue since 1937-38. War and its attendant needs gave a great impetus to the mining, petroleum and timber industries in the Province, which was reflected in big increases in revenue to the Province. The petroleum industry in particular, due to the world shortage of petroleum, saw its greatest period of expansion. The major oil companies encouraged by tax concessions from both Dominion and United States governments spent huge sums in drilling and prospecting for new fields. The peak production of oil in the Province was reached in 1942, and it is now on the decline. Unfortunately, despite the expenditure of large sums, new discoveries of oil did not offset falling production in Turner Valley. During 1945-46, revenue from petroleum and natural gas rentals and royalties dropped over \$400,000.00, and further decreases may be expected unless important new discoveries are made.

Coal production for the Province in 1945 was the highest in history—7,801,248 tons as against 5,519,208 produced in 1939. Corresponding increases have been shown in the royalty collected on coal production from Crown leases and sales. Since the coal industry of the Province was able to meet the greatly

increased requirements necessary to maintain our war machine and more recently to help out Ontario when the United States' supply failed, it is hoped that future Dominion policy together with a vigorous programme of research to discover new uses will establish a stabilized market for our coal production with its tremendous reserves, and thereby ensure orderly development of the industry and steady work for our miners.

The timber industry also enjoyed a great period of expansion during the war years, due to requirements for construction of military camps, airdromes, etc., and production is still increasing with the return of more men to lumber work and the demand for lumber in the construction of houses. Timber branch revenues in 1945-46 topped the million dollar mark for the first time since the Province took over the resources, but it is doubtful if the present rate of depletion can be maintained, if we are to provide for future requirements by instituting a programme of sustained yield and also provide the necessary forest cover.

War has also brought a certain amount of prosperity to the farmers with the increased prices for farm products. Farmers have been able during the war years to pay off old debts, which is reflected in the increase of \$73,157.93 in revenue received from grazing retails, etc., in 1945-46, and the arrears as at March 31, 1946, are the lowest ever.

With an assured market for our grain over the next four years and a stabilized price, prospects look good as far as crop share revenue is concerned. It should be noted that municipalities and school divisions now receive 80% of moneys collected by the Department on crop shares in lieu of their right to tax Crown cultivation leases for school and municipal purposes. The sum of \$154,462.27 was paid to School Divisions and Municipal and Improvement Districts during 1945-46 on crop share accounts.

Expenditures have risen along with revenues during the war years though not quite to the same extent. A further increase in expenditures can be expected in the future. Replacements for worn out equipment unobtainable during war years will have to be purchased, and if present price levels are maintained at greatly increased prices. Staffs, particularly the outside staff, depleted during the war, will have to be brought up to strength. Additional funds will have to be furnished to establish more adequate measures to conserve and perpetuate our forests and timber areas if we are going to preserve essential watersheds and provide shelter belts, both of which are vital to agriculture in the Province to prevent drought and erosion besides maintaining a sustained yield of merchantable timber.

Additional funds will also be required to assist in the re-settlement of returned veterans. Under the provincial scheme for providing agricultural leases to returned men, care is being taken to avoid hardships caused after World War I through the granting of homesteads without regard to the suitability of land for farming purposes. Each application for an agricultural lease is now inspected and examined as to suitability by a qualified soil inspector.

In summing up, while the Department has been able to show large surpluses during the last five or six years, it will be necessary to expend additional funds in the years to come to encourage planned development and protection of our resources. Efficiency in the handling of our resources cannot be measured in terms of surpluses, but only by its contribution to the prosperity and well being of the Province.

INDEX TO STATEMENTS

- A.—Statement of Receipts from All Sources.
- B.—Statement of Receipts—Income Account.
- C.—Statement of Receipts—Capital Account.
- D.—Statement of Expenditure for the year ending March 31st, 1946.
- E.—Statement of Receipts—Agricultural Advances.
- F.—Statement of Receipts and Payments—Special Areas Trust Account.
- G.—Statement of Receipts and Payments—Special Districts Trust Account.
- H.—Statement of Receipts—Special Areas and Special Districts.
- I.—Statement of Receipts by Branches.
- J.—Statement of Receipts—School Lands Branch.
- K.—Alberta School Lands Trust Fund Balance Sheet.
- L.—Alberta School Lands Sales Revenue Account.
- M.—Statement of Collections on Tax Recovery Lands.
- N.—Statement of Receipts and Expenditure for sixteen year period—1930-46.
- O.—Statement of Receipts by Branches for sixteen year period—1930-46.

STATEMENT OF RECEIPTS FROM ALL SOURCES

From April 1, 1945, to March 31, 1946

STATEMENT A.

	Gross Receipts	Refunds	Net Receipts
Income Account	\$3,656,547.70	\$ 253,185.74	\$3,403,361.96
Capital Account	18,677.15	424.98	18,252.17
Reimbursement of Previous Year's Expenditures	813.77	.....	813.77
School Lands Trust Fund	181,045.35	489.69	180,555.66
Special Areas and Special Districts	473,273.11	3,799.04	469,474.07
Unapplied Receipts carried forward (subject to refund) .....	.....	.....	.....
Suspense	893,321.21	689,260.54	204,060.67
Tax Recovery	36,517.24	193.45	36,323.79
Improvements	3,452.57	2,049.33	1,403.24
Land Patents Cultivation Crop Share	3,791.12	.....	3,791.12
Purchase of Improvements on Agricultural Leases	303.00	.....	303.00
Provincial Lands Agricultural Lease Crop Share	649.79	.....	649.79
School Land Cultivation Crop Share	25,902.84	.....	25,902.84
Grazing Rentals, Fees, etc.	21,792.16	.....	21,792.16
	<u>\$5,316,087.01</u>	<u>\$ 949,402.77</u>	<u>\$4,366,684.24</u>

STATEMENT B.

STATEMENT OF RECEIPTS—INCOME ACCOUNT

From April 1, 1945, to March 31, 1946

INCOME ACCOUNT:	Gross Receipts	Refunds	Net Revenue
Fisheries:			
Miscellaneous	\$ 1,623.83		\$ 1,623.83
Fishing Licenses	26,182.00	\$ 44.00	26,138.00
Angling Permits	15,024.29	1,512.44	13,511.85
Boat Licenses	45.00		45.00
Game Branch:			
Miscellaneous	859.31	9.88	849.43
Game Licenses	106,346.72	6,795.05	99,551.67
Registered Trap Lines	26,630.00	160.00	26,470.00
Fur Tax (less Commissions)	89,927.25	2,126.16	87,801.09
Sale of Fur	26,922.05	15,460.99	11,461.06
Lands and Grazing Branch:			
Miscellaneous	26,124.33	867.29	25,257.04
Grazing Rentals, Fees, etc.	265,731.86	31,141.14	234,590.72
Hay Fees, Dues, etc.	5,568.00	343.25	5,224.75
Agricultural Leases	6,147.72	3,144.43	3,003.29
Improvement Collection Fees	885.39	43.59	841.80
General Sales Interest	749.78	1.14	748.64
Cultivation Rentals, Fees, etc.	21,422.90	8,302.84	13,120.06
Surface Rentals	3,939.31		3,939.31
Timber Branch:			
Miscellaneous	7,907.77	100.00	7,808.77
Timber Rentals, Fees, Dues, etc.	1,022,837.51	27,251.25	995,586.26
Mining Lands Branch:			
Miscellaneous Rentals, Fees, etc.	41,076.75	135.65	40,941.10
Coal Rentals, Fees, etc.	150,641.68	165.00	150,476.68
Coal Royalty	260,144.66		260,144.66
Coal Mines Act Sundry Revenue	5,226.50	26.00	5,200.50
Petroleum and Natural Gas Fees, Rentals, etc.	355,749.07	2,748.00	353,001.07
Petroleum and Natural Gas Royalties	553,162.69	2,822.22	550,340.47
Mineral Tax Act	160,248.88	122.75	160,126.13
Unearned Increment Tax	4,857.49	9.06	4,848.43
School Lands Branch:			
Interest on Sales	68,799.82	389.63	68,410.19
Royalties, Leases, Rentals, etc.	380,362.31	148,972.09	231,390.22
Miscellaneous:			
Casual	17,025.61	322.54	16,703.07
Services and Supplies	3,176.97	147.35	3,029.62
Salaries and Expenses, Reimbursements	875.25		875.25
Tax Recovery Office Fees	324.00	22.00	302.00
Total (carried to Statement A)	\$3,656,547.70	\$ 253,185.74	\$3,403,361.96
Special Districts (carried to Statement E):			
Interest on 1936 Seed Grain Advances	77.28		77.28
Interest on 1937-38 Feed and Fodder Advances	9.00		9.00
Interest on 1938-39 Feed and Fodder Advances	25.09		25.09
TOTAL INCOME ACCOUNT	\$3,656,659.07	\$ 253,185.74	\$3,403,473.33

STATEMENT C.

STATEMENT OF RECEIPTS—CAPITAL ACCOUNT

From April 1, 1945, to March 31, 1946

	Gross Receipts	Refunds	Net Revenue
Land Sales Principal	\$ 18,677.15	\$ 424.98	\$ 18,252.17

GOVERNMENT OF THE PROVINCE OF ALBERTA
LANDS AND MINES DEPARTMENT
EXPENDITURE CLASSIFIED BY APPROPRIATIONS AND CHARACTER
FOR THE YEAR ENDED MARCH 31, 1946
INCOME ACCOUNT

Service	1101 Minister's Office	1102 General Office	1103 Advisory Board	1106 Calgary Land Agency	1109 Peace River Land Agency	1113 Northern Alberta Forest District	1114 Crow's Nest-Bow River Forest Reserve	1116 Clearwater Forest Reserve	1117 Brazeau-Atabasca Forest Reserve	1120 Cypress Hills Forest Reserve	1123 Petroleum and Natural Gas Conservation Board	1124 The Mines Act	1125 Supervision of Grazing	1127 Fire Fighting, General	1128 Postage	1129 Tree Nurseries	1132 Radio Communication	1134 Special Areas Board	1135 The Game Act	1136 The Fisheries Act	S.W. 1/1945-46 Expenses, Natural Gas Utilities Board	S.W. 16/1945-46 Construction, Main tenance and Oper- ation of a pheasant rearing station at Brooks	Totals
Advertising		\$ 3,584.38					\$ 1,952.20							\$ 7.50					\$ 36.00	\$ 6.00			\$ 3,633.88
Automobiles		2,534.90												9,625.21					1,905.00	976.10			7,368.20
Board		670.99																	115.14				9,625.21
Books and binding																							670.99
Cinema and photographic supplies		5,349.65				\$ 3,583.52	700.10	\$ 609.83	\$ 143.84			\$ 60.65	\$ 141.30				\$ 4,324.82		1,131.84	2,032.10		\$ 6,622.83	24,700.48
Equipment												794.24											794.24
Examinations							37.05	8.00	210.00				282.70			\$ 82.13			155.90	3,157.33		536.20	4,774.51
Feed and seed					\$ 10.91	123.12	12.35	6.99	9.47	\$ 7.49		.54	7.73						8.22	18.57			264.30
Fees and commissions		58.91											3,265.01										3,265.01
Fencing							66.61	61.38	395.68	7.43		29.64	103.52	6,014.53		50.49	796.54		685.44	946.12	\$ 1.00	23.46	10,737.06
Freight, express and cartage	\$ 6.37	468.13		\$ 30.50	48.34	1,001.88													58,197.65				58,197.65
Grants, bounties for destruction of pests		3.70				143.13	52.42	70.88	116.01					685.46			249.77		193.43	384.65		13.84	1,913.29
Heating, lighting and power														20.15									20.15
Hospital and medical supplies																				12.50			12.50
Laundry and cleaning		586.00																					586.00
Legal fees and expenses																							1,803.66
Material						566.88	3.60	34.98	276.99											921.21			1,803.66
Miscellaneous expenses and supplies	7.75	436.19				968.46	487.18	262.11	241.78	4.00		18.69	580.40	102.10		125.25	958.70		1,402.97	1,516.67	13.30	644.22	7,769.77
Newspapers and periodicals	22.00	36.75										8.75					12.06		54.48	12.57			146.61
Postage	100.00	82.57										11.94	9.00		\$ 11,702.44		80.00		224.16	62.96	36.06	10.00	14,850.85
Printing, stationery and office supplies	78.33	16,621.99		739.74	738.30	438.68	305.00	105.00	175.00	30.00		2,397.46					118.13		2,830.70	528.54		.90	23,426.18
Rates, rentals and insurance	52.89	372.06		285.02	198.46	228.76	67.93	46.50	11.46			18.47	38.07	7,593.97			785.63		326.94	540.48			10,473.84
Repairs and replacements	652.64	7,920.72		80.29	92.55	4,773.50	1,858.53	1,346.25	1,651.04	843.20		278.59	578.19				3,599.80		1,933.88	5,264.69		21.95	30,893.82
Salaries	7,692.00	262,303.81		20,498.06	13,116.25	80,031.22	46,909.25	23,053.98	32,170.96	3,235.00	\$ 35,638.36	33,874.73					17,748.08	\$ 53,276.06	30,492.48	33,579.17			657,981.05
Special services		40.75																	1,200.00				47,582.09
Surveys		5,492.03															105.00			527.84			6,124.87
Telegrams and telephones	790.07	2,251.45		178.07	36.59	81.95	145.52	106.63	71.56			936.73	76.30				42.07		790.74	589.72	84.56	23.97	6,205.93
Travelling expenses	210.21	14,584.14	\$ 1,333.29	274.63	52.70	20,197.81	2,720.81	2,110.78	2,153.86	440.06		7,183.80	704.84	1.25			1,419.13		6,235.99	14,125.49	2,132.16	249.47	76,130.42
Wages		199.06				4,186.08	7,444.32	2,925.63	4,014.24				7,101.48	35,145.12		1,395.22	13,544.04		2,057.68	11,204.77		1,270.92	90,488.56
TOTAL: Income Account	\$ 9,612.26	\$ 323,598.18	\$ 1,333.29	\$ 22,086.31	\$ 14,302.10	\$ 116,676.26	\$ 63,210.02	\$ 30,805.61	\$ 41,728.02	\$ 4,585.65	\$ 35,638.36	\$ 45,697.09	\$ 12,888.54	\$ 59,195.29	\$ 11,702.44	\$ 1,653.09	\$ 43,783.77	\$ 53,276.06	\$ 109,978.64	\$ 76,407.48	\$ 12,982.04	\$ 9,417.76	\$1,100,558.26

CAPITAL ACCOUNT

Apprn. No.	Service	Repayable advances and loans
1181.	Charitable Purposes, Hospitalization and Medical Services in Special Areas	\$ 16,373.64

STATEMENT E.

STATEMENT OF RECEIPTS—AGRICULTURAL ADVANCES
From April 1, 1945, to March 31, 1946

	Principal	Interest
1939 Agricultural Advances	\$ 22.07	
1936-37 Feed and Fodder	95.95	
1937-38 Feed and Fodder	357.16	9.00
1938-39 Feed and Fodder	271.73	25.09
1936 Seed Grain	1,213.36	77.28
1937 Seed Grain Implemented Loan Account	4,671.97	91.35
1938 Agricultural Advances Implemented Loan Account	5,980.26	34.58
Net to Statement H	<u>\$ 12,612.50</u>	<u>\$ 237.30</u>

STATEMENT F.

STATEMENT OF RECEIPTS AND PAYMENTS—SPECIAL AREAS TRUST ACCOUNT
For the Year ended March 31, 1946

Cash in bank, April 1, 1945		\$563,575.67
Receipts:		
Grazing Rentals	\$112,361.03	
Cultivation Rentals	24,851.05	
Settlement re Exchange of Lands	13,063.58	
Bank Interest	4,223.38	
Sale of Improvements	3,887.60	
Land Sales, Principal and Interest	3,430.02	
Repayment of Advances	1,121.19	
Equipment Rentals	1,092.55	
Miscellaneous	2,106.50	
		<u>\$166,136.90</u>
		\$729,712.57
Payments:		
Advances to Hospital Districts	\$ 86,900.00	
Equipment Maintenance and Operation	65,460.03	
Purchase of Equipment	31,699.71	
Community Pastures (less P.F.R.A. \$11,431.32, Reimbursement \$1,080.44)	10,350.88	
Travelling Expenses	3,024.12	
Purchase of House	2,988.45	
Grass Seed	2,169.81	
Stationery and Office Supplies	1,208.95	
Advisory Board Expenses	967.73	
Construction of Dams	811.73	
Recoverable Advances	227.32	
Miscellaneous	1,368.34	
		<u>207,177.07</u>
Cash in bank, March 31, 1946		<u>\$522,535.50</u>

STATEMENT G.

STATEMENT OF RECEIPTS AND PAYMENTS—SPECIAL DISTRICTS TRUST ACCOUNT
For the Year ended March 31, 1946

Cash in bank, April 1, 1945		\$385,682.28
Receipts:		
Special Districts Tax	\$220,763.10	
School Grants	39,546.77	
School Lands Crop Share	4,622.97	
Bank Interest	2,215.56	
Miscellaneous	1,959.34	
		<u>269,107.74</u>
		\$654,790.02
Payments:		
School Requisitions	\$180,096.93	
Maintenance of Roads	64,222.40	
Hospital Requisitions	35,429.74	
Relief and Public Welfare	20,166.65	
Assessment Expenses	11,580.89	
Maintenance of Offices	3,643.58	
Travelling Expenses	2,970.76	
Telephones and Telegrams	2,402.59	
Stationery and Office Supplies	1,380.45	
Postage	1,188.00	
Land Titles Office Fees	1,112.00	
Sidewalks	1,080.13	
Pests and Weeds	454.71	
		<u>312.67</u>
Recoverable Advances	\$ 90.31	
Accountable Advances	222.36	
Miscellaneous	1,411.58	
		<u>327,453.08</u>
Cash in bank, March 31, 1946		<u>\$327,336.94</u>

DEPARTMENT OF LANDS AND MINES

STATEMENT H.

STATEMENT OF RECEIPTS—SPECIAL AREAS AND SPECIAL DISTRICTS

From April 1, 1945, to March 31, 1946

	Gross Receipts	Refunds	Net Revenue
TAXES:			
General Tax—Statement G	\$220,805.54	\$ 42.44	\$220,763.10
Social Service Tax	21,540.20	.25	21,539.95
Reporting School Tax	656.47		656.47
Refunded to School Districts	\$ 623.64		
5% Commission to Special Districts Trust Account	32.83		
Total Collections	\$ 656.47		
Hail Tax	324.85		324.85
Refunded to Hail Board	308.59		
5% Commission to Special Districts Trust Account	16.26		
Total Collections	\$ 324.85		
Total Tax Collections	\$243,327.06	\$ 42.69	\$243,284.37
Special Districts Collections—Less Taxes	48,322.13	26.58	48,295.55
Statement G	\$ 48,344.64		
Less: Reporting School Commissions	32.83		
Less: Hail Tax Commissions	16.26		
	\$ 48,295.55		
Special Areas Trust Receipts	168,774.12	3,729.77	165,044.35
Statement F	\$166,136.90		
Less: Equipment Rentals	1,092.55		
	\$165,044.35		
Agricultural Advances—Statement E	12,849.80		12,849.80
	\$473,273.11	\$ 3,799.04	\$469,474.07

STATEMENT I.

STATEMENT OF RECEIPTS BY BRANCHES

For the Fiscal Year ending March 31, 1945, and March 31, 1946

	Fiscal year ending March 31, 1945	Fiscal year ending March 31, 1946
INCOME ACCOUNT:		
Fisheries Branch	\$ 33,264.10	\$ 41,318.68
Game Branch	185,638.47	226,133.25
Lands and Grazing Branch	220,599.44	286,725.61
Timber Branch	843,680.79	1,003,395.03
Mining Lands Branch	1,663,316.88	1,360,104.48
Mineral Tax	92,783.29	160,126.13
Unearned Increment Tax		4,848.43
School Lands Branch	420,062.24	299,800.41
Miscellaneous	25,225.25	20,909.94
CAPITAL ACCOUNT:		
Lands Sales Principal	22,125.48	18,252.17
TRANSFERRED TO OTHER DEPARTMENTS	78.32	813.77
SCHOOL LANDS TRUST FUND	349,104.99	180,555.66
SPECIAL DISTRICTS	312,714.18	291,579.92
SPECIAL DISTRICTS AGRICULTURAL ADVANCES	10,371.65	12,849.80
SPECIAL AREAS	122,025.11	165,044.35
UNAPPLIED RECEIPTS CARRIED FORWARD:		
Suspense	147,880.06	240,384.46
Improvements	1,080.14	1,403.24
Purchase of Improvements on Agricultural Leases		303.00
Land Patent Cultivation Crop Share	2,489.01	3,791.12
Land Patent Agricultural Lease Crop Share		649.79
School Lands Cultivation Crop Share	37,125.17	25,902.84
Grazing Rentals, Fees, etc.	24,502.99	21,792.16
	\$4,514,067.56	\$4,366,684.24

STATEMENT J.

STATEMENT OF RECEIPTS—SCHOOL LANDS BRANCH

From April 1, 1945, to March 31, 1946

	Receipts	Refunds	Net Revenue
INCOME ACCOUNT:			
Interest on Sales	\$ 68,799.82	\$ 389.63	\$ 68,410.19
Grazing Rentals, Fees, etc.	30,098.01	107.26	29,990.75
Hay Fees, Dues, etc.	1,210.11	47.25	1,162.86
Agricultural Leases	60.00	10.00	50.00
Cultivation Rentals, Fees, etc.	197,769.74	144,330.09	53,439.65
Surface Rentals	497.49	10.00	487.49
Miscellaneous Leases	3,764.26	35.00	3,729.26
Timber Rentals, Fees, Dues, etc.	47,222.43	2,265.58	44,956.85
Coal Rentals, Fees, etc.	4,053.68	32.00	4,021.68
Coal Royalty	27,514.41	.....	27,514.41
Petroleum and Natural Gas Fees, Rentals	22,980.58	.....	22,980.58
Petroleum and Natural Gas Royalties	40,683.27	2,106.23	38,577.04
Miscellaneous	4,508.33	28.68	4,479.65
	<u>\$ 449,162.13</u>	<u>\$ 149,361.72</u>	<u>\$ 299,800.41</u>
TRUST ACCOUNT:			
School Lands Sales Principal	181,045.35	489.69	180,555.66
	<u>\$6,630,207.48</u>	<u>\$ 149,851.41</u>	<u>\$ 480,356.07</u>

STATEMENT K.

ALBERTA SCHOOL LANDS TRUST FUND—BALANCE SHEET, MARCH 31, 1946

ASSETS			
Cash in bank and on hand		\$ 91,338.87	
Investments:			
Dominion of Canada Bonds (book value)		11,251,776.80	
Accounts Receivable:			
Undue Principal	\$ 122,600.87		
Arrears Principal	369,918.83		
		<u>492,519.70</u>	
			<u>\$11,835,635.37</u>
LIABILITIES			
Alberta School Lands Trust Fund		<u>\$11,835,635.37</u>	
			<u>\$11,835,635.37</u>

STATEMENT L.

ALBERTA SCHOOL LANDS SALES—REVENUE ACCOUNT

From April 1, 1945, to March 31, 1946

Arrears Interest as at March 31, 1945	\$151,745.22	
Interest Charges	29,785.07	
Interest Revenue		\$ 68,410.19
Court Orders—Re Farmer's Creditors Arrangement Act		2,313.17
Interest written off—Re Cancelled School Land Sales		29,416.05
Arrears Interest as at March 31, 1946		81,390.88
	<u>\$181,530.29</u>	<u>\$181,530.29</u>

STATEMENT M.

STATEMENT OF RECEIPTS AND EXPENDITURE

For 16 year period, 1930-1946

	Gross Receipts	Refunds	Net Receipts	Net Revenue on Income Account	Total Expenditures from Appropriations	Surplus on Income Account
1930-31	\$ 713,921.44	\$ 4,036.85	\$ 709,884.59	\$ 572,965.86	\$ 224,197.32	\$ 348,768.54
1931-32	1,135,413.64	6,407.90	1,129,007.74	1,032,307.57	690,448.51	341,859.06
1932-33	968,929.06	14,659.34	954,269.72	861,477.66	571,861.51	289,616.15
1933-34	1,068,650.48	16,772.56	1,051,877.92	937,095.80	462,407.61	474,688.19
1934-35	1,337,394.04	26,445.07	1,310,948.97	1,169,496.15	522,967.61	646,528.97
1935-36	1,310,890.21	47,051.55	1,263,838.66	1,152,475.78	504,544.57	647,931.21
1936-37	1,807,855.35	42,707.76	1,765,147.59	1,646,496.09	649,776.50	996,719.59
1937-38	1,789,276.20	68,941.29	1,720,334.91	1,606,156.50	521,564.72	1,084,591.78
1938-39	2,125,754.87	47,657.63	2,078,097.24	1,864,712.75	709,624.60	1,155,088.15
1939-40	2,629,622.16	72,133.44	2,557,488.72	1,944,098.82	708,605.34	1,235,493.48
1940-41	2,941,633.35	87,813.81	2,853,819.54	2,031,494.38	670,278.85	1,361,215.53
1941-42	3,967,861.44	499,420.02	3,468,441.42	2,593,485.14	847,555.32	1,745,929.82
1942-43	3,920,989.65	264,632.43	3,656,357.22	2,753,159.00	806,948.41	1,946,210.59
1943-44	4,504,913.73	416,578.27	4,088,335.46	2,821,784.73	861,907.08	1,959,877.65
1944-45	5,329,173.91	815,106.35	4,514,067.56	3,484,630.31	1,041,839.92	2,442,790.39
1945-46	5,316,087.01	942,402.77	4,366,684.24	3,403,473.33	1,100,558.26	2,302,915.07
	\$40,868,368.54	\$3,379,767.04	\$37,488,601.50	\$29,875,309.87	\$10,895,085.70	\$18,980,224.17

STATEMENT OF RECEIPTS BY BRANCHES

STATEMENT N.

For 16 year period, 1930-1946

	Fisheries Branch	Game Branch	Land and Grazing Branch	Timber Branch	Mining Lands Branch	School Lands Branch	Mineral Tax	Unearned Increment Tax	Miscellaneous	Land Sales Principal	Transferred to Other Departments	School Lands Trust Fund	Special Areas and Special Districts	Unapplied Receipts	Trust Accounts	Total Receipts
1930-31	\$ 4,827.54		\$ 74,996.87	\$ 121,085.59	\$ 372,055.86				\$ 597.47	\$ 6,705.39		\$ 113,749.01		\$ 15,009.29	\$ 1,455.04	\$ 709,884.59
1931-32	20,203.47		114,664.30	174,400.21	450,681.94	\$ 271,760.18			413.00	8,438.60		43,947.85		36,319.67	7,994.05	1,129,007.74
1932-33	15,827.10		114,389.01	123,707.36	391,813.38	215,327.81			7,522.85	7,522.85		40,065.81		26,737.56	18,465.84	954,269.72
1933-34	15,989.61		117,789.55	153,818.78	477,724.11	168,571.71			3,202.04	7,938.25		56,136.23		40,924.25	9,783.39	1,051,877.92
1934-35	19,949.89		115,599.20	225,063.17	477,296.68	327,787.36			3,799.85	9,765.20		80,132.43		40,316.83	11,238.36	1,310,948.97
1935-36	21,418.16		89,910.52	303,964.31	547,483.63	191,587.19			7,111.97	9,643.65		62,555.30		39,133.13	30.80	1,263,838.66
1936-37	24,317.93	\$ 117,989.34	111,610.39	331,036.53	757,247.46	293,763.48			10,530.96	10,867.23		55,799.89		51,803.38	181.00	1,765,147.59
1937-38			181,412.38	360,380.18	818,609.83	234,027.61			11,726.50	9,525.14		48,442.09		56,211.18		1,720,334.91
1938-39			159,415.63	298,434.00	1,032,502.10	358,197.11			16,163.91	8,593.93		86,322.26	\$ 68,299.49	50,168.81		2,078,097.24
1939-40			148,286.74	359,786.16	1,050,221.46	371,626.59			14,177.87	8,702.54	\$ 19,888.05	83,664.73	418,068.06	83,066.52		2,557,488.72
1940-41			125,544.35	612,175.84	945,333.30	337,777.81			10,663.08	9,511.39	851.49	76,589.34	633,745.14	101,627.80		2,853,819.54
1941-42	22,298.59	161,122.17	145,981.43	732,179.40	1,073,084.50	368,056.87	\$ 75,120.93		15,066.17	10,416.91	7.36	127,874.26	594,010.46	143,222.37		3,468,441.42
1942-43	21,975.49	157,280.99	161,376.91	774,172.70	1,215,777.93	311,612.10	94,364.68		16,331.46	11,100.94	200.00	145,341.71	543,062.32	203,759.99		3,656,357.22
1943-44	29,194.09	172,229.45	151,059.84	843,106.86	1,112,506.30	395,325.32	102,075.15		16,267.66	15,810.92	103.10	292,923.42	674,346.65	283,386.70		4,088,335.46
1944-45	33,264.10	185,638.47	220,599.44	843,680.79	1,663,316.88	420,062.24	92,783.29		25,225.25	22,125.48	78.32	349,104.99	445,110.94	213,077.37		4,514,067.56
1945-46	41,318.68	226,133.25	286,725.61	1,003,395.03	1,360,104.48	299,800.41	160,126.13	\$ 4,848.43	20,909.94	18,252.17	813.77	180,555.66	468,393.63	294,226.61		4,365,603.80
	\$ 270,584.65	\$1,020,393.67	\$2,310,362.17	\$7,260,386.91	\$13,745,759.84	\$4,565,283.79	\$ 524,470.18	\$ 4,848.43	\$ 172,187.13	\$ 174,920.59	\$ 21,942.09	\$1,843,204.98	\$3,845,036.69	\$1,678,991.46	\$ 49,148.48	\$37,487,521.06

Special Areas Administration

REPORT OF THE CHAIRMAN, SPECIAL AREAS BOARD,
M. BALDWIN

The year proved to be comparatively dry over the greater portion of the area, yields of grain being on the average quite low, the hay and feed crops short. The mild winter, however, contributed toward a successful wintering of stock, and no great hardship was experienced.

The general condition throughout the area for this period may be considered as fairly good, and a spirit of optimism pervades the district. This can, no doubt, be attributed to the fact that peace has again been restored, and we look forward to the future in hope and confidence.

Order in Council 1376/44 provides that where the period for redemption has expired and upon the approval of the Special Areas Board, the person who at the time of final acquisition of title by a municipality now comprised in the Special Areas was the owner of the land taken under the Tax Recovery Act, or of property the title to which has been taken by the Department of Lands and Mines under the Tax Recovery Act, or the purchaser of the parcel shall be permitted to acquire title to such land upon payment of all taxes shown in the records of the Department of Lands and Mines to be due with respect to the parcel together with the taxes of the current year, and that upon payment being made a notification for the land shall be issued to the purchaser free and clear of encumbrance, save those arising from claims of the Crown in the right of the Dominion of Canada.

This Order in Council is being taken advantage of and has, together with the privilege of comprising Seed and Feed Advances contracted in the period 1936 to 1939, proven to be of great value to the residents, through which many are acquiring clear title to their homes.

A sufficient supply of water for stock watering is still a problem within the area, but this is being overcome to some extent by the construction of dams and dugouts.

The problem of an assurance of sufficient feed for the successful wintering and for finishing of live stock will, no doubt, remain with us until some system of irrigation on an extended scale is introduced in the area.

In spite of the drought, 4,148 pounds of crested wheat grass seed was harvested in the Sounding Creek Area at a cost of 4.8c per pound, and approximately 4,718 pounds in Bow West Area at a cost of 4.5c. The balance of the 18,495 pounds of seed obtained in 1945 was bought from residents of the areas and a seed company at from 9c to 10c per pound.

During 1945, 10,167 pounds of seed were distributed to 65 farmers to re-seed public lands and 8,328 pounds were in storage at the end of the year, most of which was distributed in the spring of 1946. No brome was harvested. There were 530 pounds brome in storage January 1, 1945, and 3,000 pounds were bought from a seed company at approximately 14c per pound, all of which was distributed by the spring of 1946. Small amounts of alfalfa reed canary and creeping red fescue were distributed for demonstrational and experimental purposes.

The Special Areas bought a Kirchner sweepstacker in July, which was demonstrated at twenty-seven different points, putting up over 400 tons of hay, with 400 farmers of the Special Areas in attendance. This type of stacker was

selected because it is especially suited to our conditions where a mobile machine is required to handle hay in scattered sloughs. One man, alone if necessary, can operate the sweepstacker and put up his hay, which is important in the case of our many isolated farmers, who had great difficulty getting a haying crew at the right time. The ability of the sweepstacker to load hay racks also increases its adaptability in those cases where hay is hauled a few miles to ranch headquarters for stacking. Anyone getting one of these stackers should get it on rubber or equipped with auto wheels so that standard 600×16 discard tires may be used.

Beef Calf Feeding Clubs were in operation at Jenner and Consort. The Jenner Club held their show and judging competition in Iddesleigh, which was attended by about seventy-five people of the district, then the calves were trucked to Brooks to the large show and auction sale, where they brought satisfactory prices. The Consort calves were shipped to Edmonton after a successful local show. One calf from Consort won the reserve championship at Edmonton and sold for 35c per pound.

The following is a summary of the permits and leases issued during the period:

Grazing Permits on Public Lands number 1,341, representing 670,586 acres.

Grazing Permits on School Lands number 584, representing 253,905 acres.

Cultivation and Grazing Permits on Public Land number 685, representing 133,313 acres of cultivated and 64,731 acres of uncultivated land.

Hay Permits number 104, representing 1,241 tons and 68 Feed Permits. Because of the short pasture condition which prevailed, considerable activity took place in the use made of the Head Tax Pastures. There were 478 permits issued for 7,567 cattle and 893 horses, making a total of 8,460 head of stock taken care of.

CULTIVATION AND GRAZING LEASES

	No. Issued	Acres
Twenty-year Cultivation and Grazing Leases	55	14,457
Six-year Cultivation and Grazing Leases	127	33,365
Number issued on School Lands	9	1,554
	<u>191</u>	<u>49,376</u>

SPECIAL AREAS GRAZING LEASES

	No. of Leases	Acres	No. of Leases	Acres
Leases and area as at 1/4/45			930	1,511,217
Decrease by withdrawal		2,254		
Cancellations	98	68,245	98	70,499
			<u>832</u>	<u>1,440,718</u>
Increase to existing Leases		33,342		
New Leases issued	382	292,458		325,800
			<u>1,214</u>	<u>1,766,518</u>
Special Areas Leases issued to 31/3/46			1,481	2,034,365
Cancelled to 31/3/46			267	267,847
Existing Leases as at 31/3/46			<u>1,214</u>	<u>1,766,518</u>

CESSFORD IRRIGATION PROJECT FOR 1945

This project does not show a very favourable report for the current year, due to lack of sufficient water for irrigation from the Bartman Dam. This was due to there being no run-off into the dam for the past two years.

We have at the present time some 286 acres under cultivation in the project, 100 acres of this was land broken on the N.W. 20-23-11-W. 4th in 1944 and seeded to oats in the spring of 1945. This acreage was not placed under the ditch due to scarcity of water and taking same from other users of the project. This 100 acres of oats was a complete failure due to drought.

Local users of the project seeded about 150 acres of oats and barley this year. This crop germinated well in the spring due to local showers.

Irrigation commenced about July 12th with a fair measure of success. However, on July 16th the Board was compelled to instruct our ditch rider to close the water gate in order to leave sufficient water for stock.

The general results being that the 150 acres seeded to coarse grains, this acreage only received about 70% watering. The crop which was watered matured to a good crop.

No new breaking was done this year due to drought conditions.

On June 16th, 1945, a meeting was called at Cessford by the Board for the purpose of forming a Water Users' Association to cover the management of this project, as per Chapter 105, Water Users' Act.

Even this year, with the existing shortage of water, a considerable amount of feed and grain were realized by the users of the project, and with an assured supply of water this project could prosper and be of great benefit to the surrounding territory.

Road construction within the area was again limited by the amount of machinery available. However, the season could be considered as satisfactory, and resulted in the following construction: Elevated grade 80 miles, heavy standard grade 147½ miles, standard grade 177½ miles, 12¾ miles gravelled—a total of 404¾ miles.

In addition to the above, the usual patrol work was done. Our bridge and culvert crew worked steadily all season notwithstanding the fact that materials were hard to get at times.

Local roadwork was confined to secondary roads and consisted of light grade, filling holes, installing small culverts, picking stones, cutting weeds, etc.

It is still necessary to have considerable maintaining done by local work, as we are short of power machinery for keeping all roads in repair, and new machinery of this type is still unprocureable.

Municipal Hospital Districts have been set up in the area at Oyen and Cereal, some eighteen townships added to the Consort Hospital District, eleven townships taken in by the Coronation Hospital District, and a considerable acreage added to the Hanna Hospital District.

The establishment of a Medical Health Unit within the area is under consideration, as is also the probability of remodelling the Agricultural Building at Youngstown to be made use of as an Old Folks' Home.

This building has been idle for a number of years, and the need of a home of this kind within the Area is very great.

